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Typewriter

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Typewriter.

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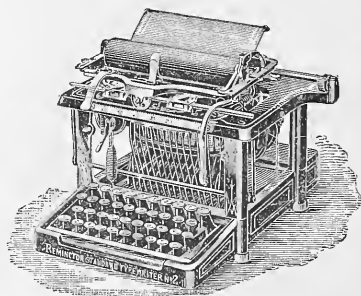
OF DESIGN,

Durability

OF CONSTRUCTION,

Progress

IN IMPROVEMENTS,



Ingenuity

OF DEVICES,

Simplicity

OF MECHANISM,

Adaptability

TO ALL KINDS OF WORK.

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WYCKOFF, SEAMANS & BENEDICT,
327 BROADWAY, NEW YORK.

PRACTICAL TYPEWRITING:

BY THE

ALL-FINGER METHOD, WHICH LEADS TO OPERATION BY TOUCH.

ARRANGED FOR

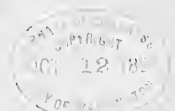
Self-Instruction and School Use.

THIRD EDITION.

BY

BATES TORREY,

Author of "Instruction in Practical Shorthand."



5422-21

NEW YORK:
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PREFACE TO THIRD EDITION.

It is gratifying to an author to write under the above caption. We are not insensible to the situation, and cordially thank typewriters everywhere for making the event possible.

There are fifty makes of writing machines to-day where there was one in 1873. Method in typewriting has likewise gained currency, and the writer by accident hesitates to make himself known. A speed of two hundred words a minute shows what the machine is capable of, and the fact that this was attained by use of all the fingers puts to rest all doubt of the efficiency of that style of procedure.

The Bureau of Education states that from July 1, 1889, to June 30, 1891, over sixty thousand persons were taught shorthand in the United States, and it is presumed a large proportion of that number studied typewriting. These are the statistics for about two years. It is a suggestive record.

The widespread use of shorthand in business has made necessary the introduction of a vast number of writing machines, which accounts for the enormous demand for both stenographers and typewriters. The machine has also extended in many other directions, and the movement has not yet reached a limit. We can all be prophets, or the future may be judged by the past.

The present volume contains a few improvements, principally toward making the primary study of typewriting more interesting. Touch writing is given more specific instruction, and more material for practice is furnished. The essential features of the method are unaltered.

BATES TORREY.

INTRODUCTORY.

Two hundred thousand stenographers are to be found in this country, and far more than that number undoubtedly operate the typewriter. Writing machines that are a marvel of ingenuity issue at least a hundred a day from great plants of mechanical completeness. What a wonderful development from the crude contrivance which first exhibited a semblance of practical utility twenty years ago.

Our introductory remarks in the first edition were somewhat apologetic, because while the typewriter as an invention was being perfected, a technique of its manipulation seemed to be unthought of, and a long period elapsed before that received popular consideration. Then the all-finger method made an appeal for favor, and in an astonishingly brief time its merits became known. As a method it has superseded all others, and *Practical Typewriting* has contributed its share to the reformation.

That typewriters are a success goes without saying, and in the shadow of their exceeding utility and popularity the all-finger method has advanced too far to admit of a backward movement. The workers of the world bend before the machine which *Puck* parodies as being "more puissant than the Gatling gun," and eagerly acknowledge its power. Commerce, the law, science, literature, art, business everywhere, education in manifold aspects—one and all, go to the little machine for some measure of assistance, and no branch of physical or intellectual labor comes away unsatisfied.

Man's life is quickened and lengthened by the tireless activity of the writing machine. Its incessant click beats marching time to every forward movement, and makes progress more progressive. Men turn from weary toil to find labor lightened by an agreeable succession of manual gymnastics; and brain and heart throb with sympathetic zeal when the fingers begin their saltatory movements.

A new profession has opened to the gentler sex, and all welcome her to a place in affairs. Educators are not indifferent to the signs of the times, and the schools are receiving an impulse from no less an agency than the writing machine.

Hardly since the dawn of the present era of civilization has an invention or discovery worked greater wonders; never, we think, has a single mechanical device contributed so widely and so variously to the welfare of man. The pen is indeed mighty,

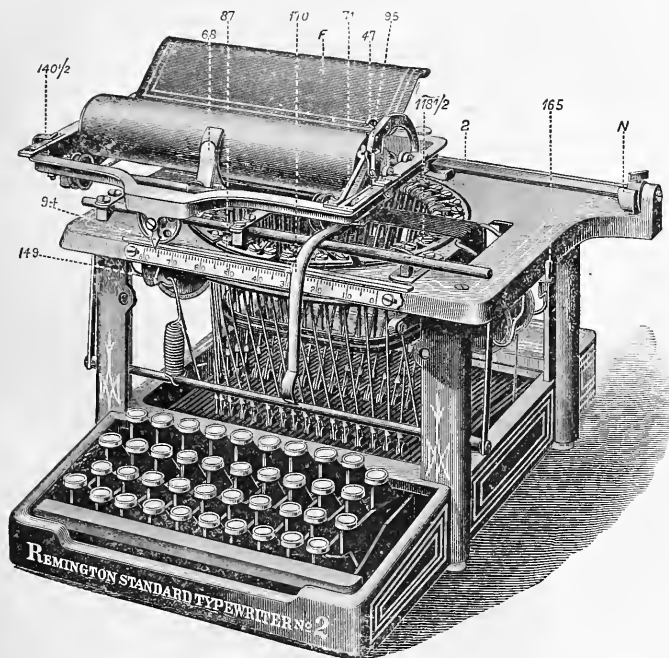
INTRODUCTORY.

but the steel corrodes. The tongue is silvery with speech, but the rhythmic keys speed language on its mission. The mind is pregnant with fertile thoughts, but ease and speed of writing makes the human intellect ten times more prolific. Commerce expands with the peopling of the continents, and the natural growth of prosperity on land and sea ; but prominent among the activities of the world the typewriter already occupies an important place—busy where business is liveliest, making man's intercourse with man readier and closer, and contributing more or less directly to the success of almost every human achievement.

PRACTICAL TYPEWRITING.

(1.) THE MACHINE.

Upon beginning to write with the typewriter the inquirer should first understand somewhat concerning the machine. The typewriter is not a complicated example of mechanics. It can be easily understood, only it were well for the learner to be impressed



by the absurdity of sitting down and pounding out words upon the keys before knowing the necessary and simple things the doing of which will not only promote the comfort of the writer, but preserve the machine from harm.

(2.) **THE CARRIAGE.** The movable frame above the type-basket is the carriage, so called, because it carries the paper back and forth over the writing point. The carriage properly demands notice before the keyboard, because it holds the paper, which is inserted by laying the sheet upon the paper shelf (F*) with the lower edge lightly resting between the wooden and rubber rollers, taking care that the right-hand edge of the paper does not project beyond the rubber coating of the cylinder (platen). Turn the platen by hand from you to roll the paper in until it shall appear above the platen scale. This will be seen upon raising the carriage by the nicked handle at the left. If the page is not parallel with the scale, adjust by both hands, pulling one or the other of the corners as the case may require. When the paper is thus squared continue to roll it forward until it passes under the paper guide (or envelope-holder) (68*) and the writing may begin.

(3.) The printing will occupy a line parallel to the scale, about half an inch above it; and a top margin of an inch and a half above the scale will be ample.

Lower the carriage and move it to the right by the left hand until the pointer (94) sets at "0" of the front scale (87). Having proceeded thus far it is apparent the paper is in position, and the carriage adjusted for action, but repressing all eagerness to write, it were better to understand still more about the process.

The carriage pointer can be freely moved to any graduation of the scale by depressing the release (140½); *never* use the long lever at the right front for this purpose.

Do not allow the paper to wrinkle as it enters the roller; have it start properly, and do not rearrange or touch it until the time for removal from the machine. If the paper has to be advanced very much, or reversed for any reason, do it by manipulation of either the platen itself, or the line-space lever (170). The platen may be reversed by the fingers if the pawl (47) be depressed, and the extent of the reverse may be measured by the notches dropped by the cylinder-stop spring (71), remembering that two notches constitute whole space between the lines, and one notch half space. The expert writer measures the extent of the reverse by the number of clicks heard, a click for every tooth on the ratchet end of the roller.


(4.) **RETURNING THE CARRIAGE.** With the carriage pointer at "0" suppose a line of writing to have begun, and presently finished, the pointer having traversed the whole extent of the scale. The adjustment for the next line is the next subject of inquiry.

(5.) *The right-hand lever now comes into use.* To return the carriage to begin a new line, pull the carriage lever (170) toward you with a slight effort, but not enough to lift the front wheel off the track; then move toward the right, conveying the whole carriage to point of beginning. The forward pull revolves the platen, thereby feeding the paper forward one or two notches, according as the line-space gauge (95) is lowered or raised. The movement to the right is limited by the stop-collar (N), and when it is adjusted at the extreme right of the back-rod the longest line can be written. If the stop-collar be moved to the left, a wider left margin will be the result.

* Letters or figures refer to plate, page VII.

(6.) NEVER lift the carriage by the line-space lever to observe the writing. Use the nicked handle at the left for this purpose. When writing the first line, the tinkle of a bell is heard as the pointer journeys between 50 and 60. This tells that the end of the line is near, and is a warning to be vigilant, more than a command to stop immediately. The bell strikes enough in advance of the end so that long words may be divided into syllables by the hyphen, and it is also a caution for the writer to pause and plan, lest the characters pile upon another in an unsightly smutch.

(7.) THE RIBBON MOVEMENT. When the carriage moves from right to left the ribbon is made to move, being wound from one spool to the other. When one spool is exhausted a difficulty will be noticed in the action of the keys (if the faintness of the writing has escaped attention), and it is time to reverse the ribbon. This is done by lifting the latch near the left spool from the slot in the crank shaft and letting it pass into the other slot, moving the shaft the way the ribbon should go to permit this. It is wise to start the ribbon a little in the new direction by turning the crank a few times, thereby making sure the latch is in the slot.

 The Ribbon, the Line-spacing and the suggestions of the Bell are three important features for the beginner to become acquainted with. Therefore read the foregoing carefully.

(8.) A lateral motion to the ribbon may be given by the handle (165) at the right of the carriage frame, moving it forward or back so as to present the entire surface of the ribbon to the types as the pigment may become exhausted. The front edge of the ribbon should be first used, adjusting the same so that the types shall print along the margin in an economical manner. Use the farther edge when it is needed.

(9.) TO CLEAN THE TYPES. With the best of ribbons the types occasionally fill. The cleanest and quickest way is to brush them as they lie in the basket, tapping the brush gently upon the faces until all dirt is removed. The letters e, a, g, o, s and c are the greatest offenders in this regard. It is wise to brush the keys before beginning to write, and frequently during the progress of writing, in order to insure positively clear work.

(10.) THE KEYBOARD. All the above has been stated with hardly a mention of the keyboard—that all-important subject in typewriting. However, let it be said that every key represents two types, either of which can be printed (under certain conditions) by the same key. When the machine is in its normal condition the lower-case or small letters are operative, but the capitals appear when the key marked “Upper-case” is depressed, it being necessary to hold this key firmly down all the time upper-case characters are in use. Those keys on the machine marked with two characters produce the lower one when the machine writes regularly lower-case, and the upper when it is set for capitals.

When the platen is shifted to produce capitals, it may be kept in that position by setting the Shifter (149), simply raising it and leaving it so lifted until the writing of capitals is ended, when it may be dropped by a quick movement. The long wooden bar at the bottom and front of the keys is the space-bar, which is struck for the spaces between words, after punctuation—and indeed for all gaps of limited extent. For long blanks it is better to move the carriage, having depressed the left-hand release key.

(11.) USING THE SCALES. Inasmuch as early writing is likely to be productive of some errors, it is important that the scales should be then understood, in order that corrections may be easily made.

In the first place, the edge of the platen scale defines the bottom of the letters, and each graduation of the scale marks the position of a character. It is well to remember this when filling blanks, or using paper that has a heading or a line to be written upon. At the same time the types strike the paper half way between the scale and the paper-guide, or, rather, on a line three-fourths of an inch above the scale. This position is attained by turning the platen and paper forward two notches of its coggled wheel. Arranging the paper for this position, or turning the platen as may be necessary, are movements described in the foregoing text. Thus far the scale referred to is that seen when the carriage is raised : but when the carriage is down the front scale (87) marks the situation, and the pointer (94) shows the place of any character. This pointer is set to any position by movement of the carriage, either by the release-key with the left hand, or the lever with the right, as previously described. It is requisite that the beginner be guided by the scales. In truth, he will have to be, as haphazard correcting will be unsatisfactory.

(12.) Possibilities for scale practice are the following :

Unfinished line. Move the pointer to the number where the line breaks off, as indicated by the platen scale, make one space and continue the writing.

Omitted letter. Note the number on the platen scale over which the gap stands ; set the front pointer at the same number, and strike the desired letter.

A special heading, address, or title. Calculate (par. 89, p. 35) the point of beginning, and set the front pointer accordingly.

Figure tabulation (par. 50). The regularity of the columns depends wholly upon a clever use of the scales.

When a sheet that has been taken out is returned to the machine. Make the last or longest written line even with the platen scale, having all letters like *t*, *l*, *i* or *f* vertical and even with the graduations. Turn the platen two notches (or clicks), and begin to write with the pointer at the place of beginning desired.

When an omitted word or letter is to be inserted between the lines. Reverse the paper by movement of the platen until the blank space to be filled is reached, then turn the platen two notches and write with the pointer at the space desired.

(13.) (a) KEEP THE MACHINE CLEAN. Too much stress cannot be laid upon keeping the typewriter CLEAN at all times. It must be kept free from dust, and a rubber or cloth cover should be conveniently at hand to throw over the machine when not in use. (See, also, par. 121.)

If left exposed the rods and bearings will be most affected, and when the parts are again set in motion the dust grinds upon the rods, cogs and axles, adhering to them, ultimately impeding the motion of the machine, and so impairing the quality of its work. No typewriter will do its duty under an accumulation of dust or foreign matter. All the parts suffer, but more particularly the carriage and related movements.

(b) OILING. Lubricate lightly all bearings, *i. e.*, wearing parts, but only when

reminded so to do by a squeak. Have the front carriage rod (118½) always oily ; likewise the toothed spacing-rack at the rear, so that the spacing-dogs will disengage easily.

Keep the back carriage-rod (2) free from oil, and brightly polished. Wipe off all superfluous oil from any part.

The entire ribbon movement mechanism, the nickeled guard over the said spacing-rack, and the springs of the fulcrum bearing of the key levers at the extreme back, beneath the iron frame, need special attention occasionally. (See par. 94, p. 36.)

(c) CARBON DUPLICATES: Place the impression paper between the white paper black side down. Feed into machine with black side next to black roller. Never hurry this for fear of wrinkling.

Also never correct upon the surface of manifold copy, without running the written line to top of roller, and sliding a paper between the carbon and the outside sheet. Unless this is done every mark made upon the outside communicates to every duplicate.

Handle carbon carefully, for if wrinkled it is practically ruined for further use. With fairly thin paper four or five duplicates can be taken ; with specially thin paper, as many as ten.

(14) THE OPERATOR.

Before considering the way to write, the foregoing pages relating to the structure and management of the machine should be studied very carefully, taking particular note of the carriage motions. In a word, become entirely familiar with the directions which relate to the easier mechanics of typewriting.



CORRECT ATTITUDE WHEN WRITING.

(15.) The first requisite toward acquiring a method of keyboard manipulation is to sit erect at the middle front of the keys, with the finger tips over the disks, and the fore and upper arm at right angles, or nearly so—a trifling slope of the fore arm downward toward the manual being desirable. An erect attitude may as well be cultivated from the beginning, as it is generally conceded that the body will maintain a perpendicular position with less fatigue than if inclined either forward or back.

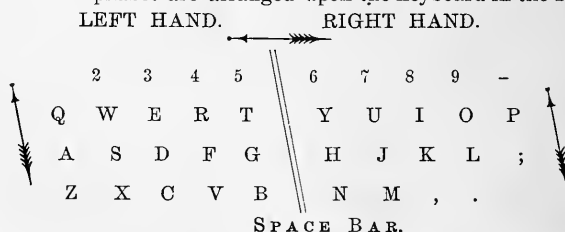
(16.) HAND POSITION is best secured by dropping the fourth (little) fingers upon P and Q, and making the other fingers to fall naturally upon the next letters in their order, namely, POIU for the right hand, and QWER for the left. Then place the right thumb on the space-bar, and if the elbows are close to the body, though a little forward of the trunk, good hand position is accomplished. It cannot be too often reiterated that *correct hand position is the foundation of method* in typewriting.

(17.) TOUCH is the next important feature. In order to begin well, the writer should have a clear idea of the proper touch, namely, that it is a nervous (in distinction from muscular) staccato blow, consisting of a sharp attack upon the keys, followed by a rapid and entire withdrawal of the finger tips between each successive stroke. Never strike two letters at the same time. Inasmuch as the appearance of typewriting depends upon the strength of the blow, the impression being dark in color, or light, according to the force exerted, it will be understood that just the right imprint must be the result of care and skill in finger action. Such action can be readily acquired by the first and second fingers, but the third,* anatomically considered, is different from the others, and the little finger is not always strong. Stiff fingers, too, are a decided drawback, but they can be rendered pliable by exercises in movements† such as piano players often practice. Well-directed discipline, however, balances the hand in its action, and the uneven strength of the fingers is soon turned into equal agility.

Be appreciative of the fact that the typewriter is a more or less delicate contrivance. It must not be abused. Have respect for its mechanical difficulties, and be determined to master not only the technique of the manual, but to trace ingenious effects to the proper cause. At the same time be considerate of the helplessness of the machine, and while inspired with the spirit of investigation, nevertheless let your prying into the reason for things be tempered with discretion.

(18.) THE KEYBOARD.

The letters of the alphabet are arranged upon the keyboard in the following order:



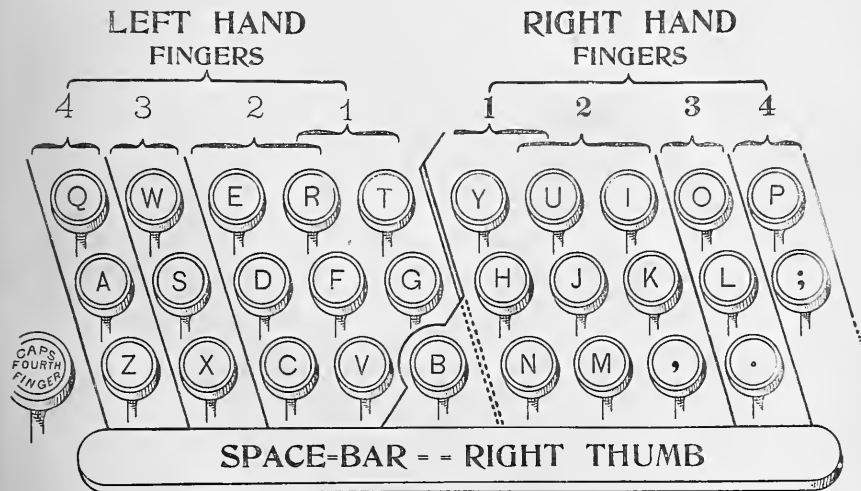
* Pianists deplore the incapacity of this finger, and some musicians resort to a surgical operation, called *double tenotomy*, to free the finger from the impediment to action.

† *Hand Culture* has become a recognized branch of piano instruction.

Memorize the letters in the order of the rows shown by the arrows, both horizontal and vertical, and note the division by the double lines which indicate right- and left-hand territory. Form a picture in the mind of just the letters to be covered by each hand, and the relative positions they hold.

(19.) Having memorized the keyboard—and not until then—it is proper to learn the special duty of each finger. The diagram below exhibits the letters in the same order as above, but surmounted by the figures 1, 2, 3, 4, which are NOT the figures of the keyboard, but are to specify the FINGERS to be used, and are so placed over the slanting rows of letters as to show which letter it is proper for EACH finger to attack. Figure 1 stands for the first or index finger of the right hand, and knowing this, 2, 3, and 4 need no explanation. The light-face figures stand for the left-hand FINGERS.

Remember that the RIGHT thumb strikes the space-bar, and that the left thumb is not employed.



By this Diagram the full scope of the all-finger method may be demonstrated. Adopting the procedure previously described for obtaining hand position, namely, to place the right fourth finger on P, and the left fourth on Q, and dropping the remaining fingers upon the top row (bank) of letters, the simple office of the five fingers will be made clear when the index fingers reach R and U, and the right thumb drops to the space-bar. This same spanning of the fingers carried to the next bank below, and on to the next, will show how nearly all the letters are to be depressed.

But it will be discovered that the oblique rows YHN and TGB are not reached, because in each bank there are more letters than fingers to operate them. YHN and TGB are provided for by simply shifting the whole hand toward the center, which brings the

strong index fingers upon these letters, and thereupon the second fingers strike UJM* and RFV. At the same time the scope of the third and fourth fingers is not increased—their duty remains the same—because they are weak members as compared with the others.

(20.) The following lessons are to drill the student in the details of methodic procedure; and at the outset it may be remarked that the results of method are worth the seeking, being grace of motion, harmonious and healthy cultivation of the powers, accuracy, proficiency quickly attained, and without undue fatigue. Therefore, knowing perfectly well how to insert the paper, how to operate the carriage and ribbon, and appreciating the suggestions of the bell—writing may begin. Attend strictly to the business of these exercises, however fascinating may be the allurements of word and sentence writing.

LESSON I.

(21.) FOUR-FINGER STUDIES.

Next below are the four-finger studies of typewriting. Note particularly that the figures stand for the FINGERS to be exercised, and that the province of each finger is clearly shown by the Diagram. For instance, **111** means that the first finger of the right hand must strike a key three times, and the diagram indicates what letter it is proper for that finger to attack. Between each group of figures strike the space-bar once with the right thumb—never the left.

The next figure group, **111**, means the first finger of the left hand, and so on.

111, 111, 222, 222, 333, 333, 444, 444, 12, 12, 23, 23, 34, 34, 43, 43, 32, 32, 21, 21, 13, 13, 123, 123, 321, 321, 1234, 1234, 4321, 4321, 1321, 1324.

Continue the same alternation of hands, taking the cue from the groups above, and passing from one bank of keys to another until the scope of the manual is exhausted, and all possible fingerings have been rendered.

131, 132, 234, 243, 242, 41, 21, 42, 1234, 4321, 421, 134, 1213, 1324, 2414, 412, 413, 423, 3121, 4213, 1424, 4121, 124, 214, 341, 314, 2134, 1432, 4113, 2221, 2114, 3322, 4411, 4444, 3334, 2233, 1312, 1113, 2224, 3331, 4443, 1133, 4114.

(22.)

¹ u u u	(space)	j j j	m m m	u j m	m j u	¹ r r r	f f f	v v v	r f v
² f v r	i i i	k k k	, , ,	i k	e e e	d d d	c c c	e d c	c d e
⁴ / / /	o l.	p p p	:	p ;	³ w w w	s s s	x x x	w s x	⁴ q q q
¹ z z z	q a z	z a q	a q z	¹ y y y	h h h	n n n	y h n	¹ t t t	¹ g g g
									¹ b b b

* The optional fingering of the inner rows of letters by either the first or second finger is best illustrated by the manner of writing the initial combinations *cr dr fr gr im un*.

† HEAVY-FACE TYPE—Right hand; LIGHT-FACE—Left hand.

1 1 1 11 1234 1234 4321 4321 4231 4231
tgb nh y bgt uiop rewq poi u qwer piou qewr
1324 1234 1234 4231 4131 4 1 3 2 4 1 3 2
rweq yiop tewq pioy qrwt ppuuooii qqrrwwee
4321 4321 1234 1234 4123 1432 2314 2341 3 2 1 4
asdf ;lkj fdsa jkl; :jkl fasd klj; dsaf ssddffaa
1231 432312 321 23 123414 123234 13124 13231
jkllj asdsfd lkjjkl fdsafa jklkl; gsdfa hlklj
1413 1213 4321 32121 4231 1324 4 2 3 1
gafs hkjl zxcv /,m,mn zxcv vxcz zzzcccx xxvvv
124 21 1 2 3 1 2123 14131211 14
bcz zcb mmmnnn,,,... nm,m,. bzbxbcbv bzbzbzbzbz

LESSON II.

(23.) WORD DEVELOPMENT.

Have a method of typewriting; do not pound the keys aimlessly. Pay particular attention to the carriage and its functions. Practice the following, which is another way of developing a knowledge of the keyboard.

1 14 13 23 24 34 1 14 12 123 121 1
uuu up no io ip op rrr rq re rew ret ttt
12 12 121 12 13 121 1112 1123 1212 121 1
tr tre ter te tw yet tyre tyro true try yyy.
12 13 14 12 131 1 41 41 42 43 4321
yi yo yp yu you ppp py pu pi po poet
432121 431 211 43321 3 32 3212 2321 321
poetry pottery power www we were ewer wet
324 3241 1 13 1312 133 1224 12242 2 21
weep wept ttt to tore two trip tripe iii it
212 1212 134 13321 13421 1 12 13 14 124
ire tire top tower toper hhh hk hl h; hip
121 121 143 142 141 1 12 13 14 143 342
hit her has had hag ggg gd gs ga gas sad
142 142 141 241 2141 1 12 21 241
gad fad gaff daft draft nnn nm mn man

2 4 3	2 4 2	1 4 2 2	2 4 1 2	1	1 3	1 3 3	1 4 2	1 4 1	1
mass	mad	name	mane	bbb	bx	box	bad	bag	jjj

1 1 1	1 4 1	1 2 1	1 2 1	1 3 4 4	3	3 4 3	1 3 4 3	3 4 2	4 3 4 2
jag	jam	jim	jip	joppa	lll	lass	glass	lad	plad

Make no effort for speed at the beginning. Be painstaking and accurate. Heed the bell. After the bell rings, complete the group of letters if there is sufficient space; otherwise begin a new line. The right margin cannot be even like the left, but be sure and leave no large gaps. Grasp the line-space-lever firmly, and actually move the paper forward, when returning the carriage to point of beginning.

Observe the progressive passage from letters to words, but write **ONLY** the simple words given. Restrain the desire to wander over the keyboard in an expedition of discovery.

Do not let the ribbon run out. Brush the types occasionally. Lift the carriage as seldom as possible, and refrain from pulling the paper into place if it becomes disarranged. Make the paper even before beginning to write, and after that adjust it by management of the lever or platen. When removing the sheet entirely from the machine use both hands, and draw forth steadily.

(24.)

Frequent letter sequences:		1 1	2 1	4 1	3 1	1 2	2 1	3 2	2 1
		th	in	an	of	re	er	ou	en

2 3	4 1	3 1	2 3	3 2	2	1 3	4 1	4 3	3 1		2 1
is	at	or	es	se	ed	to	ar	as	it	al	on

Less frequent:

3 3	3 1	3 1	2 3	4 3	1 3	1 1	1 2	4 1	4 1	1 3	1 2	1 2	2 1
ow	st	wh	cl	pl	bl	br	gr	pr	qu	fl	tr	fr	cr

Syllabic combinations:	4 1	4 2	2	2 3	1 1	2 1	1 2	3 4
	ab	ac	de	ex	fy	im	be	op

3 1	1 4	2 1	3 1	1 1	2 1
ob	up	un	ly	ty	ry

1 1	1 1 2	1 1 2	1 1 2 3	1 1 2 1 2	1 1 4 1	1 1
th	the	three	threw	there	that	thy

1 1 2 3	1 1 3 3 2	1 2	1 2 4 1	1 2 4 2	1 2 3 1	1 2 1 2 1 2	1 2 1 2 4 1
this	those	re	rear	read	rest	retire	retreat

2	2 2 1	2 2 1 3 2	4 3	3 4 3	3 4 3 1	3 4 3 1 2
ed	edit	editor	as	was	wast	waste

3 4 1 3 1	2 1	2 1 1	2 1 2 3	2 1 2 4 3	2 1 2 3	1 2 1 2 3
water	dr	dry	drew	dread	dress	redress

43 pl	431 ply	4341 play	4341 plat	43412 plate	43421 plait	12 gr	12 41 great	412 agree
12 greed	12221 grief	12 fr	12 1 fret	12 free	31 wh	3141 what	31212 where	
3134 whop	3124 whip	313 2 whole	31332 whose	3121121 whether	41 qu	4121 quit		
4124 quip	412 1 queer	41212 quite	41221 quiet	41212 quire	41312 quote	13 fl	13432 flask	
1341 flag	13431 flash	31 st	31 2 1 street	12 3 strew	31224 strip	312242 stripe	21 ch	
2144 chap	2141 chat	21244 cheap	21241 cheat	41 ab	41432 abase	4121 abet	21 ev	2121 ever
21211 every	21211 event	212121 everett	13 bl	13431 blast	1342 blade	13422 black	23 ex	
2321 exert	232 3 excess	21 cr	2123 crew	21123 cruel	211 cry	2123 cress	21442 crape	
21 in	21121 inter	2112 into	21121 infer	213131 insult	21 im	214 imp	214321 import	
214332 impose	214112 impute	21 un	21231 union	21123 until	211222 untried	1 56	32 47	
22 38	33 29	321 234	21 345	21 456	1 1 567	112 678	123 789	

LESSON III.

(25.) HAND ALTERNATION.

In the following practice keep ALL the fingers hovering over the keys according to the instructions previously given for correct hand position. Write each word many times, and after the first careful "picking out" of the exact fingering look away from the manual, and trust to a recollection of the fingers and the relative locations of the letters. (See Touch Writing, Lesson V.)

421 art	2432 ease	323 oil	12121 refer	24121 caret	123121 fester
131 joy	42121 advert	34123 wages	2121 kinky	131231 homily	1412 rate

3 2 4 1	4 3 1 2 4	4 2 1 2	2 4 1 2 1	1 2 1 4 1 2	1 4 2 1
seat	plump	acted	caterer	regard	fact

4 3 1	3 4 3	1 2 3	1 2 3 2	2 3 2 1 4 1 2	3 2 3
ply	wax	mill	hulk	execrate	1891

3 4 2	4 3 1 2 1	2 4 1 2	3 2 1 2 1 3	3 1 2 4 1 4	1 3 4
sad	aster	cafe	secrets	strata	mop

4 1 3 4	4 2 3	3 2 4 1	4 2 3	1 2 1 2 4 1	4 1 2 1 4 1 2
pulp	pull	wear	pill	retreat	average

1 1 2 4 2	1 2 1 2 3 1	1 3 2 3	1 3 1	1 2 1 2	1 2 1	2 1 3 1
*B with right hand:	bread	bunion	boil	boy	bunk	buy knob

1 2 1 1 3 1	1 3 1 1	4 1 4 1 2	1 4 2 1	4 1 2 1
B with left hand:	nimbly	nobby	abate	barb abet

4 2 1 2 4	1 4 1	1 4 1 2
zebra	bat	barge

wed moon punk west ohio 1879 pomp scarf verge monk sacred zest
state waft limp graves pump aware onion lion vex care afterward 1867
case reader tract hunk philip noun milk fades imply dead trace hull

LESSON IV.

(26.) THE COMMON WORDS.

The Capital is now introduced, which is obtained by depressing the key marked "Upper Case" with the left fourth finger, and holding it down while the capital is being made.

The fingering of capitals under the right hand will be the same as for lower-case; but in case of the LEFT HAND, the fourth finger being engaged upon the shift, the fingers at liberty will execute as consistent a rendering of the all-finger idea as may be expedient. For instance, while holding the shift down with the left fourth, strike the letters in that division as follows:

3	2	2	1	1
Q A Z	W S X	E D C	R F V	T G B

As the two movements for a capital are almost simultaneous, the hand is immediately free to proceed with systematic fingering.

Do not indulge the left little finger. If not strong at first, it will develop by practice. Never fear but it will eventually do the work.

* This letter being so near the center, it is available for either hand in the event of a complication.

The figured words of this lesson comprise more than half of any discourse not technical, and their value for practice material is so great that they may be termed the *scales of typewriting*.

(27.)

3 2	3	2 3	1 2 3	1 3 3	3 3 1	2 4 3
All	As	Do	His	Now	Own	Was
3 2	3 1	1 3 2	2 1	1 3	3 1 1	2 2 3
Am	At	For	In	No	Our	Will
3 1	1 2	1 4 2	2 1	1 3 1	2 1 2	2 1 3
An	Be	Had	It	Not	She	Who
3 1 2	1 1	1 2	2 3	3 1	2 3	2 1*
And	By	He	Is	Of	So	Why
3 1*	1 2 1	1 2 1	2 4 1	3 1	1 1 2	1 2 1
Any	But	Her	May	Or	The	Yet
3 1 2	2 4 1	1 2 1	2 1	3 1 1	1 3	1 3 1
Are	Can	Him	My	Out	To	You
	1 2 1	1 3 3	2 2	3 1	1 3 3	
	Did	How	Me	On	Two	

Write each word many times, and when familiar with the procedure look away from the keyboard—which is Touch writing. (See Lesson V.)

(28.) SENTENCES.

Begin each sentence with a capital, and end with the period, the latter being made by shifting to upper-case. After striking the period continue to hold down the shift while making three depressions of the space-bar (for the customary space between sentences), so that the capital of the succeeding sentence may be written without superfluous motion. Strike the period very lightly.

When the comma follows a word, make one space after it. If a phrase is not finished on one line, continue upon the next; or divide a long word into its syllables by the hyphen, if justifying (equalizing) the lines demands it.

He was there. Are you true? Will be free. You have addressed him. Had not seen him. Can do it quite well. Why not state the truth? Our own boy. He did not care. She can be queer. The two of you are at war. How can it be so? He saw his own caterer in the café. Will you buy red wax? Why not say so, if you can not get it? On the way to the fair. He was the one referred to. The man in the moon. Pull out of the way. The State of Ohio is in the West.

* See Lesson VIII.

(29.)

3 2 1 2 1 A f t e r	2 1 2 1 E v e r	2 4 2 M a d e	2 2 2 1 S u c h	2 1 1 3 U n t o
1 2 1 B e e n	2 3 3 1 M o s t	2 3 1 2 M o r e	2 4 2 2 S a m e	2 2 1 1 W i t h
2 3 2 2 C o m e	2 4 1 M a n y	3 2 1 2 1 O f t e n	1 1 4 1 T h a t	2 1 4 1 W h a t
2 3 1 2 D o n e	1 4 2 2 M a k e	2 3 2 2 S o m e	1 4 3 1 U p o n	2 1 3 2 W h o m

From Have Here Into Might Much Mine Never Only Over Then This
Than Thus They Were When Your.

(30.) SENTENCES.

In sentence writing strive to attain a fluent action of the fingers, writing each character with even touch in an uninterrupted movement from the beginning to the end of the phrase. Above all things, avoid a jerky style of manipulation.

They might have been tired. Either of them may have been regarded as quite busy.
When were you here? We have much to do this week. What was the red flag for?
When will she wed? The zebra was striped black and white. Jonah went down to
Joppa. We never make more than this. Did you have the caret right? His was a
sacred homily. Everett was very weary. What have you done upon this great theme?
Were you there, and did you see me? What will you do about it? Much can be done
by anyone. Say, when were mine made? Many might have easily been imposed upon.

(31.)

3 1 3 2 1 A b o u t	1 2 1 2 1 2 B e h i n d	3 1 1 2 1 O t h e r	2 1 2 1 2 W h e r e	2 1 3 2 3 U n l e s s
3 3 3 4 1 3 A l w a y s	2 3 1 3 2 C o u l d	2 2 1 2 S i n c e	2 1 3 3 2 W h o s e	2 1 2 1 U n d e r

1 2 1 4 1 3 2	2 2 1 1 2 1	2 1 4 3	2 1 2 2 1	2 2 1 1 3 1 1
Because	Either	Shall	Which	Without
1 2 1 3 1 2	2 1 2 1 1	1 1 2 1	2 2 1 1 2 1	2 3 1 3 2
Before	Every	There	Within	Would
1 2 1 3 1 2	1 2 2 1 1 2 1	1 1 2 3 2	2 1 2 1 1 2 1	2 1 2 1 2
Beyond	Neither	These	Whether	Whence

Begin Care Far Feel Fill Full God Give Great Heaven Hope Just
 Knew Kind Life Like Little Lord Love Man Near People Part Quite
 Right See Send Tell Thank Thing Think Told Truth Time Use Usual
 Way Went Wish Word World Work Whole.

(32.) SENTENCES.

Where were the other two? Come over here when you can. What will you have?
 Before you made this. Can that be so? About every one can see it. What shall we
 do? Now, then, here we are again. They were beyond your power. How can they
 do the work so well? Some of them were too little to give away. How do you feel
 about doing the work? From whence do you come? We will always thank God for
 the work we can do. They sent far and near for him. Life is full of truth and hope.
 Work always with a will. It is now time to go. The Lord is near unto them that love
 him. She did not know whether to tell him or not. We thank you very much for the
 good time we have had. Neither of them told the whole truth. They think they do not
 care to take part in the work. Do unto others as you would that they should do to you.
 We have not seen you since that time. He knew they would come at the usual time.
 All men do not think alike. Thou shalt love the Lord thy God with all thy heart, and
 with all thy soul, and with all thy strength, and with all thy mind, and thy neighbor
 as thyself.

LESSON V.

(33.) TOUCH WRITING.

After the foregoing words can be readily written according to the instruction given, the operator should practice them by Touch.

TOUCH is the term coined by the author to describe writing without looking upon the keys, and typewriting by Touch is a natural outcome of the all-finger method, being entirely practicable as the result of correct hand position, precise finger attack and diligent practice.

Touch writing, in an exact sense, requires a high degree of expertness, and except for exhibition purposes is hardly desirable. On the other hand, a more reasonable definition of the term TOUCH is to typewrite with only an occasional and flitting glance upon the keys, and facility of such writing is quickly attained. For the all-round writer this liberal interpretation of the word Touch is more popular than the other.

At the outset a few essentials merit attention. There must be a perfect familiarity with the letter manual, and an unerring sense of the location of every character. The duty of each finger must be understood, and a correct hand position absolutely maintained.

(34.) HELPS TO TOUCH WRITING.

Presupposing a thorough knowledge of the keyboard and a dexterous control of all the fingers, there are a few helps which may be suggested to promote Touch writing; that is to say, there are strategic points on the manual which serve as *guides* to position and direction. In the maintenance of hand position the outside letters P and A mark one boundary, and the rows UJM and RFV define the inside limit. This is *primary* hand position. Shift the hands toward the center, and the rows YHN and TGB mark the inside limit of what may be called *secondary* hand position.

The letters P and A* represent fixed places of agreeable location, which may serve as *guide* keys, and easy progressions from them are OL and WSX, because the latter are subject to a fixed fingering by the third fingers.

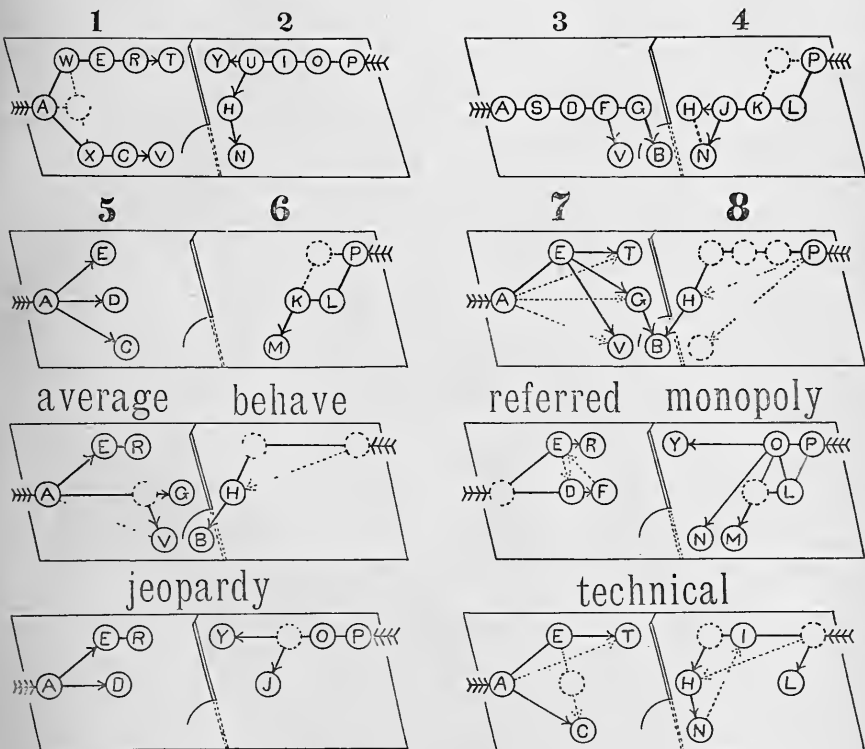
For striking intervals the long and strong fingers are best able to overcome the difficulties of the interior of the keyboard. The writer by Touch will have the greatest difficulty in locating the inner keys; the outer rows will rarely be missed. Therefore it is apparent that the variations of distance from the *guides* (P and A), taken as centers of action, call for nice calculation on the part of the first and second fingers.

If, by reason of raising the right hand to return the carriage, hand position be momentarily lost, a command of the keyboard can be recovered by assistance of the left hand, which should remain in place. All the finger tips may fall softly upon the keys, when a pause is made to establish position; and, if necessary, the thumbs or index fingers can be made to interfere, if secondary position be sought; while a tenure upon the guide keys should be always possible, to the extent of keeping the hands within bounds.

When writing by Touch it is necessary the hands should brood over the keyboard, the fingers resting upon the disks lightly, and ready to attack any letter without very

* A is selected rather than Q, because the former is a higher average letter.

much movement of the hands to one side or the other. Certain intervals will be found more difficult to span than others, and some words will prove troublesome at first because of awkward sequences of letters. Below are illustrated a few of the more difficult intervals on the standard keyboard, together with words that will illustrate a simple phase of Touch Writing.



(35.) INTERVALS AND HOW SPANNED.

From examination of the above it will be seen how nearly all the letters are located by sliding stretches from the guides P and A taken as pivotal points. Certain intervals are of quite common occurrence, like AT, AG, AB, or ET, EG, EV, and the method of striking them with accuracy is clearly suggested. The letters closely adjoining P or A are so easily located as to require no mention.

When a capital in the left-hand division is to be written, it were best to locate the letter, and then depress the Shift without losing the bearings. Many capitals had best

be written by setting the machine to upper-case. The figures may be cautiously made, being guided by a sense of location of the top bank of letters.

Let it be understood that all this instruction is for the hesitating and not over-confident learner, but as the method becomes more familiar there will develop that almost intuitive sense which will make the writing proceed as if worded direction and mnemonic helps had not been a part of the learning process.

(36.) THE ADVANTAGES OF TOUCH WRITING.

The operator, according to no particular design, will learn to perform many movements unconsciously, and because of the simplicity of the process of machine writing attain to considerable speed, even though grace be lacking, and strength stand for skill. But, on the other hand, having a superior method at command, the situations where the attention may relax become far more numerous, common words and common material of words will be written with hardly a glance upon the manual, the fingers simply dropping upon the keys almost without volition, and acting with steady, constant movement, leaving the mind free to grapple with the perplexities of the text.

Such manipulation of the writing machine puts itself on a high level as a manual art, and sets the seal of approval upon the typewriter as exemplifying a *system* of writing, because the action and development of the *fingers* is as complete as the mechanical ingenuity of the *device* is notable.

LESSON VI.

(37.) WORDS FOR PRACTICE.

3 1 2 2 1	1 2 2 1	3 2 2 1 1	3 2 4 1 1 2
Quiet	Hurt	Query	League
4 3 1 1	1 2 1 2	4 1 2 1	4 1 1 4 3 2
Pout	Germ	Prey	Phrase
4 3 2 1	1 2 2 1 1 1	2 2 1 1	3 4 2 1 4
Port	Freight	Witty	Opera
2 1 2 2	3 4 3 1	4 2 1 2	1 2 3 4 2 1
Eerie	Apply	Pure	Helper
3 1 3 1 2	1 2 4 3 2 1	1 2 1 1 1	3 4 4 3 4 1 2
Quote	Report	Night	Lapland
2 1 3 1	1 4 3 1 2	1 4 3 1	4 3 4 1 1 2
Error	Value	Gash	Plague
2 1 2 1 2 1	1 3 1 2	2 3 4 2	1 2 2 1 1 1
Writer	Note	Clad	Fright
1 2 3 1	2 2 4 1 1	2 4 2 2	3 4 2 4 1 2
Troy	Wear	Sack	Opiate

2 3 1 1
Worry

2 4 1 2 1
Equip

1 2 1 2 1
French

3 1 2 3
Quill

4 1 2 1 1
Pretty

4 3 4 1 3 4 1
Popular

1 2 2 1 1
Bring

2 1 4 2 1 1
Impugn

Imminent Debt Divine 1584 Inquiry Ships Success Intent Right Cause
Usual Mistake Dusty Common Sufficient August Sleigh Queen Jamb
Neigh Shekel Coal Liable Zealous Xanthus Teach Afraid Reason Delay
Margin Duty Manage Favor Equal Letter Honest Govern Happy

(38.) SENTENCES.

It is a good rule in typewriting to adopt one way of writing a word, and adhere to that way without wavering. If the eight fingers and right thumb are carefully trained to write in methodic fashion, the act is next performed without volition, and the intent of this manual is to direct to just such mechanical action in machine writing.

Philip will value the report. The query makes the boy pout. Errors in her work plague the pretty typewriter. The Frenchman will bring freight from Lapland. Bring the child some pure milk. Xerxes retreated quietly after sacking the port. It was the wish of the governor to abate the bank tax. All agree that the monk was clad in a black sack. Nothing we can do shall help or hurt you. The State debt has faded away. We note the intent of your inquiry. Shall we know when he comes? We are here for only a few hours. Replying to your query, would say the estate is for sale. What witty phrase was he reading from the letter? Our ships of war go to almost every part of the world. Where we are aware of a fact your words won't be worth much. He was far behind us on the road to Troy. Everyone says the opera is going to be a success. Zealous in the cause of duty. The coal was found in the right strata. We went many a long league that night. "Of all the saws I ever saw saw, I never saw a saw saw as that saw saws."

LESSON VII.

(39.) THE COMMON PREFIXES AND AFFIXES.

PREFIXES. Employ capitals a portion of the time, and memorize the fingering, as these elements of word structure will not be figured in the words for practice given further on. Practice also by Touch.

3 2	3 2	3 1	3 1	3 3	3 1	3 4	3	3 1	3 1	1 2
Ac	Ad	Af	Ag	Al	An	Ap	As	Ar	At	Be

1 2	2 2 1 2 1 2	2 3	2 3	2 3 1	2 3 1	2 3 1	2 3 1 1 2 4	2 3 1 1 2 3	2 3 2 1 1 2 1
Bi	Circum	Co	Col	Con	Com	Cog	Contra	Contro	Counter
2	2 2	2 2 1	2 2 3	2 2	2 1	2 3	1 3 2	1 1 2 1	2 3 2 1
de	di	dif	dis	em	en	ex	for	hyper	il im
2 1	2 1 1 2 1	2 1 1 2 3	1 2 3	1 2	1 3 1	3 1	3 2	3 1	3 4 3 1 1
in	inter	intro	mis	ne	non	ob	oc	of	op out
3 1 2 1	4 3 1	4 3 3 1	4 2 1	4 1 2	4 1 2 1 2 1	4 1 3	1 2	3 2 1 2	3 2 1
over	poly	post	per	pre	preter	pro	re	semi	sub
3 1 2	3 1 1	3 1 4 2 1	3 1 2	3 1	1 2 4 1 3	2 1	2 1 2 1		
suc	suf	super	sym	syn	trans	un	under		

Other Prefixes:—ambi amphi ana ante. anti apo arch bio cata dia dys epi equi fore homo hetero ig intra juxta meta mal micro mon mult neo para peri retro sine subter sug sur sus.

(40.) AFFIXES. Employ no capitals.

4 1 3 2	4 2 1	4 1 2	4 3	4 1 2	4 1	4 1 1	4 1 1	1 3 2	2 3 2
able	acy	age	al	ance	ar	ary	ant	ble	cle
2 1 3 2	2	2 3	2 1 1	2 1 2	2 3 1	1 1 3	1 1	1 2 3	1 2 4 2
cule	ed	el	ent	ence	est	ful	fy	gress	head
1 3 2	2 1 3 2	2 2	2 1 2	2 1 1	2 3 1	2 3 1	2 3 1	2 3 1	2 3 2
hood	ible	ice	ine	ing	ion	ior	ist	ish	isk
2 3 1	2 1 1	2 1 2	3 2 3	3 2 2	3 1 1	2 2 1 1	2 3 1	1 2 3	
ism	ity	ive	less	like	logy	ment	mony	ness	
3 1	1 1	3 1 2 4	1 2 3 1	1 1 2	1 1	3 4 1 2	3 4 1	3 2 3 2	
or	ry	ship	tion	tude	ty	ward	way	wise	

Other Affixes:—ane aceous ade ancy ard ate dom ern ese esque eth ia ile ide ite ize kind ledge lite ly ode oid sion ster stress teen ure.

—Neither will the Affixes be figured when compounded. But it must be remembered that the last letter of the Prefix, or the first of the Affix, is likely to be influenced by the fingering of the adjacent letter.

LESSON VIII.

(41.) LESS REGULAR FINGER PROGRESSIONS.

Before proceeding to miscellaneous words and general writing, a class of words is presented below which are less easy to execute. They are, for the most part, instances of the occurrence of consecutive letters fingered the same, but the gliding movement from one to the other requires more nicety of calculation (particularly by Touch) than the ordinary progression from key to key.

It has been said that according to the all-finger method all words can be written with equal facility. This is true if the letters scatter over the manual, but words wherein the letters are bunched are a trifle more difficult to write, and those which immediately follow deserve special practice.

1 2 3 2 1 2 Reserve	4 3 2 1 Pliny	1 2 1 2 2 4 3 Technical	3 2 4 3 1 3 Zealous	1 2 3 Grew
4 1 1 2 azure	4 1 2 1 affect	3 2 1 1 looking	1 2 4 1 nymph	4 1 3 2 1 answer
4 1 4 1 2 2 aquatic	1 1 2 2 hybrid	3 2 1 2 wedge	1 2 1 2 2 1 2 minimum	3 4 4 swap
2 3 1 3 4 3 1 monopoly	2 3 kill	2 1 2 kind	1 2 4 1 human	4 2 1 2 3 1 2 perceive

Trader aqueous dear great whole exploit Aztec retire sway excerpt eject
alert tether Nyanza biter craze subject molest omniscient junk exact minimize
hump umbrageous exegetic folks destroy ecstasy folio sweet police hominy
numb unimpeded sword humbly execute recondite jump imitate yolk eclogue
record hypnotize polo oligarchy hymnology loiter

On the other hand, when Touch writing is not the particular aim, and a more legato style is preferred, a fashion of writing awkward combinations, as indicated below, may be adopted :

2 3	3 4	2 1	2 1	2 3	1 2 1 2	3 2
S W	A Q	H Y	N Y	O L	D E C E	L O

These letter sequences are pairs fingered the same on the diagram, but the privilege of using the next best finger is granted any writer. With a good sense of hand and finger position a lapse like this upon rare occasion need not be condemned, though if the INCORRECT (or exceptional) fingering precedes the correct, the caution is—be careful.

(42.) SENTENCES.

The polo pony jumped nimbly over the hedge. The whole police reserve was forced to retire. The sacred lotus grows on the African Nyanza. They perceived that the subject was hypnotized, not killed. Hominy is regarded a sweet cereal. The oligarchy holds sway over humble humanity. Umbrageous shade concealed the aquatic nymphs. The

trader witnessed great exploits in Aztec warfare. Dear Oliver, I humbly record your exact answer. Why imitate that recondite eclogue? It was bitter cold in December. The police eject those who loiter among the flowers. The crazy zealot made excerpts from the hymnology of his creed. Pliny was able to hold sway with the sword, though his force was sadly decimated. The hybrid grew in aqueous-looking soil. No decent or discerning student will practice deceit.

LESSON IX.

(43.) THE NUMERALS.

The numerals occupy the upper bank of keys, and are fingered with less regard for method, though it is expected that all the fingers shall be employed, and hand position maintained.

(44.) Lower case l is the proper character for figure one. Never use the letter I for a figure, except in Roman notation like II, IV, VII, XLI.

(45.) The capital O stands for the cipher upon most machines.

(46.) Fractions are represented by use of the / (shilling mark) when the machine has no fractional type like $\frac{1}{2}$, $\frac{1}{4}$. A hyphen is sometimes preferred, as 3-4, 5-8, 11-12.

(47.) Point off large sums into groups of three figures each by the comma, as 937,480,218,710. Employ the period for the decimal point, as .07. Strike the period very lightly at all times, on account of its relatively small face. The marks of punctuation located among the letters have systematic finger attack, but those in the upper bank are fingered less regularly.

(48.) To lift a letter or figure a trifle above the line, push back the front carriage-rod the least bit with the left hand, and hold firmly in the unnatural position while striking the key. In this way may be produced such effects as $\frac{1}{2}$, 6^s, 3^d, 4th, 12ⁱⁿ, 417^a, 90°, H^sO^c, M^c, V^{an} Winkle. This can also be made a makeshift to supply omissions when scant space is granted; as, Thes^e men, or Th'se men.

(49.) In tabular work it is wise to begin the columns of figures on multiples of some number decided upon, as 5, 10, 15, or 3, 6, 9, 12, etc. This obviates much carriage-lifting, and assists the memory in placing ditto-marks, if any are needed.

When planning tabulation, write the longest line first, or estimate from it. It is sometimes of advantage to insert a title after the column it is to head has been arranged. To accomplish this, the platen must be reversed with nice calculation. (See Par. 3.)

For examples of tabular writing, see pages 63, 64 and 65, and other specimens of the fac-simile. The beginner should practice the simple tabular forms in order to acquire a familiarity with the range of the scale and its bearing upon such work; also experiment with head lines, titles, etc. (see Par. 89) in order to attain skill in arrangement, and a quick perception of the relations of space and text which should characterize the page.

(50.) Write each of the following examples several times. Remember the scale number where a word or figure group to be underscored begins, adjust the carriage-pointer to that mark without turning the platen, and make the underscore by shifting to upper-case and striking the middle key of the upper bank. Also watch the scale carefully when writing processions of figures, in order that the units may fall under units, tens under tens, etc.

$$(a) \quad \begin{array}{r} 4) \, 88,888 \\ \underline{22,222} \end{array}$$

$$(c) \quad \begin{array}{r} 18) \, 58,925(3,273\frac{1}{18} \\ \underline{54} \\ 49 \\ \underline{36} \\ 132 \\ \underline{126} \\ 65 \\ \underline{54} \\ 11 \end{array}$$

$$(b) \quad \begin{array}{r} 123,456,789 \\ 987,654,321 \\ 1,111,111,110 \end{array}$$

(d) \$50,000, 3 $\frac{1}{4}$, 5 $\frac{1}{2}$, £7. (The L crossed by the hyphen stands for £.) M crossed by three hyphens = 1,000; a crossed by shilling-mark = at (see Par. 125); c crossed by shilling-mark = cent.

	QUANTITY.		PRICE.	AMOUNT.	DISCOUNT.
(e)	10 M lbs.	a	5c	\$500	3%
	8 " "	a	7c	560	2%
	12 " "	a	4c	480	4%
	30,000 lbs.			\$1,540	

	YEAR.	REVENUE.	EXPENDITURE.
(f)	1852	£27,158	£24,876
	1862	98,086	83,886
	1872	180,498	132,978
	1882	496,783	489,113

(g)	MORNING.			AFTERNOON.		
	2 ^a	0 ^m	0 ^s	1 ^h	59 ^m	33.8 ^s
Hour Angle	10	0	0			
Apparent Time	—0	2	44	—0	2	47.4
Equation	10	57	16	1	56	51.4
Mean Time	—0	53	31.3	0	53	31.3
Longitude	9	3	44.7	1	3	20.1
Greenwich Mean Time	9	43	15.5	1	42	51.2
Chronometer No. 1	0	39	30.8	0	39	31.1
Chronometer fast						

LESSON X.

(51.) COMMERCIAL TERMS.

The fingering of the prefixes and affixes has already been given, and will not be repeated in this exercise. Write each word many times, until every word can be executed without the least hesitation. The same word should always be fingered in the same way.

2 1 4 2 1 2	1 2 3	2 2 1 2 2 1 2	1 2
Over charge	Com mission	Dividend	An nuity
2 1 1	2 4 1 4	2 1 4 1 1 2	2 1 2 2 1
De mur rage	Equa tion	Ex change	Credit
2 1 2 1 3	4 1 2 1	1 4 3	2 3 2 1 1
Ster ling	Prim age	Balance	Ac count
2 3 1 3 2	2 1 4 1	2 3 1 1 3 2	2 1 1
En dorse ment	Draft	Re course	Curr ent
1 2 3	2 3 2 1 1	2 1 4 2 1 1 4 1	1 2 3 1 2 1
pro miss ory	dis count	chart er-party	re gister ed
1 2 1 1	2 3 1 4 3 1	1 4 3 1 2 2	2 1 1
de bent ure	coupon	ad valorem	in debt ed ness
1 2 3 3 4 2	1 2 1	2 1 1	1 3 1 2
bill'lad ing	in ter est	per cent age	ne goti able
4 1 2 4 3	4 1 2 1 2 1 2	1 1 3 2 2 1	3 4 1 2 1
semi-annual	premium	broker age	col later al
3 2 3	1 3 2 2	1 3 4 1 2 1 2	3 2 2 1 2 1 3
as sess ment	in voice	to-arrive	under writers
4 1 2 1 2 2 4	4 1 2 2 1	2 2 1	3 2 1 1
princ ip al	audit ed	re ceiv able	con sign ment

Other Commercial Terms: inventory salvage merchandise manifest assets voucher usury bond trustee cargo transit check average tonnage consign tariff customs tare debit surety drawer storage duty staples entry returns export rebate factor protest failure policy market advices security capital telegram cash-book wharfrage transfer currency traffic deficit suspense dispatch, sundries, quotation endorse solvency freight shipment finance importation schedule revenue maturity renewal acceptance clearance assignment attachment dissolution duplicate foreclosure reference guarantee investment liquidation remittance resources secretary signature warehouse account-sales

(52.) SENTENCES.

Let us see if the broker will know the endorsement. How long before the interest on the premium-note will be due? You will not get half the commission you deserve. It is a good business policy to make an inventory annually. After you examine the collateral, advise me at once. We are unwilling to discount the draft. Reference was had to the bill-lading of the merchandise. A balance appeared when the account-current was audited. The coupons of the debenture bonds are negotiable if registered. The principal consignment was sold to-arrive for a small percentage over the *pro rata* figures. The semi-annual assessment of the underwriters did not put to the credit of the policy either a dividend or reversionary additions. Charter-party, salvage, demurrage and manifest, are terms pertaining to the merchant marine. The indebtedness was receivable in sterling exchange. The item of primage upon the invoice was an overcharge. The manufacturer directed his stenographer to telegraph the secretary of the company to negotiate for a stock of supplies; but learning that the price of exchange had advanced, that sales of merchandise were slow, and an average consumption could not be guaranteed, he refused to affix his signature to the despatch. The consignee was a good customer, but declared he could not realize a satisfactory profit unless quotations were given by telegraph.

LESSON XI.

(53.) MISCELLANEOUS WORDS.

22 1	23 1 44 1	1 2 1	4 1 4 2 1 1
Sub ject	Ac company	Con ven tion	Ac quaint ance
14 1 2	2 4 1 1 2	1 2 2 1 4	2 3 2
Ad vance	Magni tude	Affirma tive	Re collec tion
3 1 2 1	3 1 2 2 1	2 4 1 2 1	1 2 3 2 1 2
Omin ous	Ordin ary	Equit able	In telligi ble
2 4 1 3 1 4 3	1 2 1 4 1 2 2 4 3	1 2 1	4 3 3 2
Marshall	Finan cial	For tun ate	Pro posi tion
2 3 2 1 2 2 3	1 3 2 1 2 1 2	3 4 2 1 4	1 2 4 3 1 2 2 1
council	mis fortune	opera tion	extraordin ary
1 2 3 4 4 1 2 1	2 2 2 3 1 4 1 2 1 2	3 1 2 1 1	4 1 4 3 2 1 2 2 4
jeopardy	memorandum	constitu tion	qualifica tions
2 1 3 3	1 2 1 2 1	3 2 1	2 2 4
know ledge	gener ally	pro secu tion	anti cip ate
1 2 2 1 3 1	2 1 3 2 1	2 1 4 3 2 1	4 1 2 1 4
dif ficult	un iform ly	un import ant	ex amination
2 1 4 2 1 2	3 2 1 4	2 1 2	2 2 2
dis charge	ob liga tion	intro duce	pre dic tion
2 3 2	1 4 1 1 2	1 2 3 4	2 3 1 2
elec tion	arrange ment	devel oped	ac cord ing ly

Sincerely independent citizens patient service opulent apprehension property
 valiant privilege Colorado mollify excellency surrender beginning refreshing
 northwestern acknowledge controversy testimony.

(54.) SENTENCES.

The qualifications of the marshal led to his election by the council. The magnitude
 of the financial operations in this country is extraordinary. To the best of my recollec-
 tion I made his acquaintance at the convention. My knowledge of the arrangement put
 the prosecution in jeopardy. It was fortunate to know the subject in advance. It

would be difficult to introduce a more equitable arrangement. Unimportant memoranda accompanied the proposition. The examination developed uniformly affirmative testimony. The prediction was ominous of misfortune. Generally it would be wise to discharge such an obligation. The constitution was intelligible to the ordinary citizen. Valiant service will mollify his excellency. We sincerely acknowledge that the exercise was refreshing to the patient. The beginning of the controversy excited some apprehension. There are many independent citizens in northwestern Colorado.

(55.) MISCELLANEOUS WORDS:

2 1 3 1 2 1	4 1 2 3	1 2 3	2 1 2
In dustry	Re quis ite	Pro fes sion	Trans cend ent
1 2 1 2	1 4 1 2 3 2 2 3	2 1 3	1 2 1 2 1 4
Func tion	Famil ies	Dis cuss ed	Genera tions
4 3 2 4 3	2 2 2	4 3 2	2 1 2 2 4
Pleas ure	De cid ed	Pro por tion	Com munica tion
3 2 2	2 3 2 1 1 2 3 2 3	1 2 2 1 1 3 1 3	2 2 1 2 2 1
Sci ence	Coun tries	Neigh bors	In dividu al
3 2 1 2 1	2 4 3 4 1 2	2 2 4 1	1 2 1 4
liber ty	calami ty	mean ness	ad mira tion
4 1 4 2 1 2 2	1 3 2 1 2 3	1 4 4 2	4 4 1 2
prac tice	bounds	happi ness	com pari son
4 3 1 2 1	1 2 2 2 2	3 1 4 1 2 3 2 2 1	3 2 1 4
pover ty	fideli ty	statesmen	ob serva tion
3 3 4 1 2 1 1	1 2 4 1 2	4 1 2 3	3 2 1 2 3 3 4 1
slavery	grati tude	re quis ite	legislat ors
1 3 1 2 3	4 1 3 2 2 1 2 2 3	1 3 2 1	4 1 2 1 2
hones ty	anxiet ies	ex tort ed	ac quire ment
1 3 1 1 2 2	3 1 3 3	4 3 3 2 1	3 2 1 4
tongue	be stow ed	power ful	ob liga tion

(56.) WRITING EXERCISE.

After this exercise can be written readily, though perhaps in a manner somewhat mechanical, because of earnest striving for the correct fingerings, and all the requirements of graceful procedure—the learner may venture letter writing. Follow the Form for Letter, par. 63, putting the same minutely into effect by copying the typewritten

model on p. 69. (See also the specimens of letter addresses, p. 68.) Other letters for simple copying practice may be found on pp. 95, 96, 119-122. In all such copying cultivate the habit of reading coherent phrases, and writing the same with fluent manipulation in an uninterrupted movement from the beginning to the end of the phrase, rather than with a spasmodic pounding out of single words. If the matter be dictated by another, which is an excellent way to promote speed, insist that phrases be read, and with as good elocution as may be possible.

Knowledge in any art or science, being always the fruit of observation, study, or practice, gives in proportion to its extent or usefulness, the possessor a just claim to respect. We do, indeed, often see all the outward marks of respect bestowed upon persons merely because they are rich or powerful; but these, while they are bestowed with pain, are received with pleasure. They drop from the tongue or beam from the features, but have no communication from the heart. They are not the voluntary offerings of admiration or of gratitude; but are extorted from the hopes, the fears, the anxieties, of poverty, of meanness, or of guilt. Nor is respect due to honesty, fidelity, or any such qualities; because dishonesty and perfidy are crimes. To entitle a man to respect, there must be something of his own doing, beyond the bounds of his well-known duties and obligations. . . . To the functions of statesmen and legislators is due the highest respect which can be shown by man to anything human; for not only are the industry and talent, requisite in the acquirement of knowledge, still greater and far greater here, than in the profession of the law; but, of the application of this knowledge, the effects are so transcendent in point of magnitude as to place them beyond all the bounds of comparison. Here it is not individual persons with their families, friends and neighbors, that are affected; but whole countries and communities. Here the matters to be discussed and decided on are peace and war, and the liberty or slavery, happiness or misery, of nations. Here a single instance of neglect, a single oversight, a single error, may load with calamity millions of men, and entail that calamity on a long series of future generations. (*Cobbett.*)

LESSON XII.

(57.) LEGAL.

2 3	4 1 2 1 2 3 2 3	3 2 1 1 2	2 1 1
ac cess ory	pre mises	as signee	per jury
4 3 4 2 1 1 2 1	1 2 1 2	1 2 1	1 2 1 2 3 1 2 4 1
plaintiff	de fend ant	de murr er	ad ministrat or

123 1	2 11	121	123121
felony	ex ecut or	con vey ance	sheriff
4332	2122 12	2321323	22
de posi tion	evidence	counsel	de ci sion
12 3443	412123421	32432	3141112
trespass	quitclaim	re lease	statute
14211	43242	2321 412	1231
ar raign	plead ing	mortgage	in test ate
21412	2221	1231	31421231
chanc ery	in dict ment	di gest	superior
423 2	21123	1224121	312421
ap pellee	duress	af fidavit	ab stract

Other Legal Terms: abeyance alibi caveat citation client codicil collusion contempt jurisdiction indenture legacy ordinance precedent probate rebuttal referee argument replevin testator requisition witness lien declaration litigation judgment verdict mayhem

(58.) ANATOMICAL.

121 2114	42 132	32 12	2 43	2 3 13	2112
vertebra	pector al	secre tions	biceps	cellul ar	cuti cle
1343432	23221	1231	3214	421	332
protoplasm	abdomen	in test ine	liga ment	pigmentary	osseous
1212	143213	44123 4	231413	414341123	12124
tegu ment	vascular	patella	corpus cle	phalanges	tibia
1113	342241	12121	423123	242123	1234
em bryo	re spirat ory	tuber cle	pelvis	cartil age	fila ment
113243	242 1	2141212	1411324	41411 3	1313233
thorax	macer ate	cranium	ganglia	pharynx	tousils
22211412	2 121143	3121112	3124114122	411412	212313
membrane	cerebral	sternum	lymphatic	dia phragm	mucous

Other Anatomical Terms: laminae parietal occipital dentition tympanum ventricle foramen orifice alimentary dyspepsia humerus capsular auricle peduncle flexion sclerotic maxillary gustatory fibula follicle pulmonary dissection scapula capillary mesentery carotid lingual bronchial clavicle gastric, labial epilepsy gangrene myopia eczema fistula catalepsy asthma pleurisy quinsy medulla vesicle vivisection

LESSON XIII.

(59.) LETTER WRITING.

The most widespread use of the writing machine is for correspondence, taken for the most part from dictation, either by the agency of shorthand or direct to the typewriter.*

Typewriting has been declared as difficult to teach as shorthand, and so it may be considered in the sense that complete instruction embraces not only a command of the mechanical features of the machine, and the technique of its keyboard, but likewise a constant education in grammar, spelling and punctuation, as well as numberless helps toward rhetorical expression.

As far as the business letter is concerned, the principal subject for attention should be the *form* of arrangement. A typewritten letter should preserve the formalities. While a single set way may not please all, yet no wide range should be given to individual preference; and we suggest a form of letter structure, arranged within the bounds of a reasonable propriety, which we are certain will displease but a very few. It is the form most in vogue among typewriters. Although circumstances may require a variation from this in some minor details, still we would not recommend the business writer to venture too much originality, because it is a conspicuous fact that poorly constructed business letters have been a sad reproach to typewriting in the past.

(60.) FORM FOR LETTER IN DETAIL.

Scale.

35 Place written from and Date.

Feed paper for two full spaces.

0	Name of Person or Firm, title, etc.	}	{ Usually half space between lines of address.
5	Street address or post-office box.		
10	City or Town address, and State.		

Feed paper one full space.

0 The Superscription ("Dear sir").

One full space.

15 Body of Letter; full space between lines.

25 The Subscription ("Yours truly").

Three full spaces for signature.

60 Title (Pres., Sec'y) of signer, if any.

Full space.

0 P. S. (Postscript) if any, written half-space.

* So many mongrel words, like *typist* and *typewritist*, have been introduced, we propose a fixed designation of—*typewriter*, to mean the person who writes, and *writing machine*, the device.

In the foregoing, close reference must be had to the Scale, and the writer will do well to memorize the directions of the Form. Below the same procedure is illustrated after the fashion of a real letter :

0 5 10 15 20 25 30 35 40 45 50 55 60 65

Minneapolis, Minn., July 15, 1894.

Messrs. TUFTS & HALL,
13 Winnebasset Street,
Providence, Rhode Island.

Gentlemen :

Your esteemed favor of the 10th instant received, and in reply to the same would say—

.....
Your truly,

Sec'y.

P. S.—

Permit me to add, etc.—

—: o :—

Every letter should have a date, and the person addressed a title of respect, if he has no professional title. For the address as a whole, the *rhomboid* form makes the best appearance. See example :

Mr. THEODORE TORREY,
No. 15 Algonquin Street,
Indianapolis, Indiana.

Presenting the name in capitals, with half-space between the lines, gives a stylish effect, but that is not imperative. It is a matter of taste, the same as the setting of an advertisement. Taste likewise has to be exercised when the name may be long and the place short, or *vice versa*. Oftentimes two lines will look better than three, but at all hazards preserve the *terraced* look, both by a marshaling of material, and by clever spacing.

On the other hand, if the subordinate part of the address be very brief, resort may be had to a shape like the following, which is far handsomer than to leave an unsightly gap at one side :

ARTHUR CUMMINGS, Esq.,
S a c o, M e.

When the name of the person or concern is written in capitals, all titles, etc., take lower case, except as to their initial letters. Drop full space to the superscription, as

the form directs, and begin the body of the letter where the carriage may stop after an off-hand lifting of the lever. The pointer will mark about 15 of the scale, but regular paragraphs thereafter indent to 5, in imitation of type composition. So much for the manner of the letter. The matter now deserves a passing notice.

Supposing the letter to have been dictated, then it were well for the typewriter to peruse his notes, and decide wisely how to arrange the same, before touching finger to keyboard. Haphazard action will not do; there is a form for guidance, and good diction to be regarded. If a business letter, it must bear a business aspect, and embody commercial expressions.

Paragraph occasionally, not only according to the sense, but for an improved appearance, when the sense will *allow*, more than *demand*. It goes without saying that all typewriting must be obedient to correct grammar, spelling and punctuation. Write dates in figures, and sums of money the same, unless a more formal style is required, when letters may be employed. A short letter should be full space between the lines. Make one space after the comma, semicolon and colon. Leave no single-letter prefixes at the end of a line, or single-letter affixes at the beginning of the next line.

Correct all errors by machine, making as few interpolations by pencil and pen as possible. Before removal of a page from the machine read it through carefully, in a search for errors. Many of the petty mishaps of typewriting can be disguised by simply reversing the paper, and making ingenious corrections. For instance, a transposition of letters calls for erasure, and the insertion of the letters in proper order. An omitted letter is easily supplied if space remains; otherwise it will need to be written a trifle above the space it should occupy, shifting the paper a little to do this. Omitted words can be written between the lines, and a caret made by lower-case *v*, after running the paper in upside down. When no space is left between words (and this is a common neglect) draw a fine line with the pen, to show where the division should be. Mistakes are likely to occur, but be vigilant to hide them before the paper leaves the machine.

Address envelopes according to the form above given for the letter address, but make full space between the lines. Remember that every city address requires a street number, and do not annoy the post-office department by unmeaning abbreviations.

(61.) MODEL LETTER FOR COPYING PRACTICE.

0 5 10 15 20 25 30 35 40 45 50 55 60 65

Boston, January 22, 1893.

Mr. JOHN Q. A. FLETCHER,
715 Blackstone Street,
New York City.

Dear Sir:

We notified you some time since that we must receive a remittance from you by early mail on your account, which is long overdue.

We sold you the merchandise in good faith, and expected you to pay for it as you agreed at time of purchase. In regard to

your claiming a discount, although we had no reason to suppose that anything of the kind was promised you, still, rather than have any trouble about the sale, we allowed your claim, expecting that your account would then be settled at once; and we now notify you, that as we have not heard from any of our numerous demands for settlement, we shall put the case into the hands of our attorney for adjustment.

If the goods were not satisfactory, you should have advised us, and we would have been pleased to make them good; but you made no claim of the kind until long after your account was due, and when we sent a man to examine the goods he found that they had been sold, and you had received the money for them. We are disposed to be lenient with you, but there is a point beyond which forbearance ceases to be a virtue.

Trusting that we shall receive a check from you by next mail, we are

Yours truly,

LESSON XIV.

(62.) "CHAIN" SENTENCES FOR TOUCH PRACTICE.

The fact that in the following sentences the last letter of a word is the first letter of the word following, gives significance to the term "chain" as above used. The object is to provide an easy passage from one word to another.

After considerable familiarity with the writing machine, ordinary manipulation is performed almost intuitively. The writer dashes into a word; it is finished before he is aware, and by a method he can hardly analyze. This seems a strange statement, but the same is true of much mental and manual behavior. The more we practice a given action, the more it is done without apparent volition.

Touch Writing demands entire familiarity with the machine, and the ability to type-write with accuracy. Begin writing these sentences slowly, locating the letters according to the instructions of Lesson V. Develop confidence next after facility of writing, for confidence stands for a great deal in Touch Writing. To speak heroically, we would say,—Do not hesitate to venture into the battle of words, and to strike effective blows right and left with decisive vigor!

Our requirements shall lead direct toward definite education.

Have every young gallant try your recipe.

When next their right to ownership prevails.

Citizens should desire enforcement touching general laws.

Develop proficient typewriting.

Attorneys submitted decisions sufficient to oust them.

Freedom may yield direct to opposition.

Curious symptoms showed Dr. Renfrew what to prescribe.

Data about taxation never read desirably.

Knowledge every year records some error repaired.

Salvation never realized does satisfy young girls.

Active, enduring, generous, sympathetic citizenship.

Statistics seem more entertaining given next to other reading.

Bad decisions seem most technical.

Possibly you ought to operate even nearer rural localities.

The eminent traits Seward displays silence envy.

Evidence even nugatory yields some effective elements.

This superintendent tends several looms.

Cheap preparations seldom make even nerve elixirs salutary.

Confined discoverers sorrow when new worlds stand decoying.

Young gentlemen need definite encouragement.

Rollo overheard Delia accept the engagement.

Elastic cords stretched down near Richard's seat.

Philharmonic concert this season nightly.

His strength has suffered desperate encounters.

Fred Dow was sad despite earnest temperance effort.

What Tancered denies Sulla affirms.

Professor Rolfe exercises some erudition.

Surely your reason need dishearten no one.

Correct typewriting gives satisfaction.

(63.) TOUCH PRACTICE.

In this testimony the easy location of Q. and A. assists in getting bearings. This and the other exercises prescribed for Touch Practice can serve for general discipline if exceedingly expert writing is not the aim.

CROSS-EXAMINATION OF MRS. D.

Q. Where do you live ?

A. In West Roxbury.

Q. How long have you lived there ?

A. Twenty-four years.

Q. When did you go to live at Mr. Randall's ?

A. I lived there from November, 1888.

Q. You remained there how long ?

A. Until August 1, 1889.

Q. Did you stay until they sold out ?

A. I did.

Q. Did you think of buying the furniture ?

A. Yes, sir.

Q. You wanted it ?

A. Yes, sir ; I—

Q. You did not get it ?

A. No ; but I—

- Q. But you did not get it? answer my question.
- A. No, sir; and (in an undertone) I'm glad I didn't.
- Q. Were you a member at the time of the Chestnut Square church?
- A. When I left Mr. Randall's I was.
- Q. Did you attend pretty regularly?
- A. I did.
- Q. How many times do you think you were there?
- A. I could not tell you.
- Q. During the summer of 1888 how much were you in attendance?
- A. A great deal.
- Q. Not regularly?
- A. I was a regular attendant.
- Q. Every Sunday?
- A. Most every Sunday.
- Q. Were you not very irregular?
- A. No, sir, I was not.
- Q. Whose Sunday School class were you in?
- A. Mr. Frothingham's.
- Q. Do you know if a record of the attendance was kept?
- A. I do not, sir.

(64.) LINES TO THE LONGFELLOW STATUE, BY GEORGE E. B. JACKSON.

The object of this exercise is to lead the writer to acquire facility in lifting the right hand to turn the paper for a new line, and return to the keys without losing command of them.

This sculptured form,
'Tis but the semblance,
And still, 'tis he!
Amid the busy throng
Calmly he sits;
Of all that pass along,
Heedless is he!
His gaze is fixed toward home.
He loved it well,
And yet he seeth naught!
His ears attent
To catch the rustling leaves
Of Deering's woods,
But still he heareth not!
Well hath the sculptor wrought.
Making the seeming—real,
The fiction—fact,
And, in enduring bronze,
His very form hath caught!

We, living, thee salute,
Sweetest of bards!
Thy voice hath ceased to be,
Yet, through the world,
Excelsior's flag unfurled,
Bears, in its strange device,
Thy name and fame!
Thy Psalm of Life still lives,
And to the weary gives
Its heaven-taught blessed words,
In pure Evangeline,
Th' unsullied life is thine;
While from the Wayside Inn,
And Village Blacksmith's din,
Thy fancy weaves such forms
Of beauty and of grace,
That but to speak thy name
Sets all our hearts aflame,
And chief of bards we place
Our Longfellow!

GENERAL INSTRUCTIONS.

(65.) The query is often made—Why are the letters of the key-banks arranged so irregularly? Aside from some mechanical difficulties which have to be overcome, the following exhibit of the comparative frequency of letters in writing will explain the matter somewhat:—

E, 1,000	A, 490	L, 270	D, 185	W, 130	V, 60		
T, 665	O, 480	C, 260	M, 140	Y, 100	K, 20	Z, 6	
N, 505	I, 475	R, 260	F, 130	G, 85	Q, 8	X, 5	
S, 495	H, 355	U, 185	P, 130	B, 60	J, 7		

(66.) Scratching, erasing, x-ing, and otherwise correcting words looks badly; some employers will not accept such work. It can be avoided in a great measure if habits of accuracy be cultivated from the very beginning.

(67.) Typewriting from dictation is exceedingly pretty work, and considerable speed can be attained if reader and writer are in harmony. Court reporters often dictate to more than one operator alternately, keeping two writing continuously, which is possible after some practice. By so doing, the dispatch of matter is greatly facilitated.

(68.) When checking off (rectifying) typewriting by reading back to another, the operation is hastened a little by calling the marks of punctuation,—“Com” “Sem”; and when a period occurs say “New sentence,” or “Paragraph,” as the case may be. Also say “Quote” before and after a quotation.

(69.) Literary work for publication makes a much better impression upon the “reader,” if neatly typewritten*; indeed, some one has said that the compositor adds to his prayers a sentiment commendatory of the typewriter.

(70.) There has been some uncertainty regarding the permanency of typewriting. We have seen legible print twelve years old, from ribbons when less was known about preparing the ink; but the legibility of writing of that age is variable. Non-copying inks that are really pure carbon are practically indestructible, but some of the colors do not endure. The so-called “Indelible Copying” is said to be the most durable.

(71.) A contributor to the *Writer* suggests, in substance, the following, to utilize the ribbon and prevent it from curling:

Cut slots, about seven inches apart, in a strip of oil-board two inches wide, also a narrow hole half way between these for the type to strike through. Run the ribbon

*“Manuprint” is a recently coined word for such MS.

through the openings, bend the oil-board under the frame of the machine at each end, and that's all there is to it.

(72.) A few sheets of MSS. for publication need not be fastened together, although they should be plainly numbered in the upper left-hand corner, with the name of the writer on the first page. Separate chapters may be fastened together—in such a way as not to inconvenience the reader. (*The Writer.*)

(73.) In MSS. for the printer it is best to leave a margin of one inch at the top of each sheet, and of half an inch at the bottom. If plenty of space is left between the lines, there is no need of wide margins at the sides. (*The Writer.*)

(74.) The following recipe for ribbon ink has been tried and found satisfactory:

Non-copying,—	{	$\frac{1}{4}$ Oz. Aniline Dye (of color desired).
		$\frac{2}{2}$ " Alcohol.
		$\frac{2}{2}$ " Water.
		$\frac{1}{4}$ " Fluid Glycerine.

If a COPYING INK is desired, use no WATER, and make it 6 oz. of Glycerine instead.

This mixture should be applied to the ribbon evenly, of course, and the difficulty of this operation makes it preferable to buy from the regular dealer, unless one has a great many ribbons to re-ink.

(75.) Typewriting for photographic reproduction should be written in red, very dark blue or green colored ribbon, green being preferred. Make interlineation in India Ink. These colors will photograph readily, and if the photo-gelatine process is employed the result will be satisfactory. There would seem to be an interesting future with regard to printing from such reproduction.

(76.) Typefounders are now casting imitation typewriter type that does not copy the faults of worn-out machines, and the printer can furnish a very good facsimile of typewriting.

(77.) Morgan's "Sapolio" is the best cleanser we have found to remove from the hands stains caused by the typewriter ribbon.

PARTICULAR INSTRUCTION.

(78.) It is not advisable to cover the roller of the machine with thick paper, or use a backing-sheet. Formerly the rollers were oftener made of soft rubber, which became

badly indented after but little use ; now the hard roller is more common, and just as good results can be obtained without a backing-sheet. In fact, the typewriter is adjusted properly when it leaves the manufacturer, and any addition to the circumference of the roller increases its diameter distance, and tends to throw the writing out of alignment.

(79.) When feeding a number of sheets, with carbon paper between for multiplying copies, the package should be allowed to enter between the rolls almost of itself, so as to avoid wrinkling the carbon. Such work should not be scratched, as any outside mark of erasure will communicate to every sheet, and below the outside copy the writing will be marred. It is better to x or / an error, and pass on.

(80.) When many duplicates are required, and the ribbon copy is not needed, the ribbon reverser hook at the left can be placed in the middle slot, and the ribbon itself moved out of the way. A number of faint impressions can be made with the period, to produce a dotted line, with the hook as above, and the ribbon in place.

(81.) Reduplication of typewritten text can also be made by an adaptation of the Cyclostyle process, its application to the typewriter being as follows : A backing of silk is applied to a sheet of especially prepared paraffine paper, upon which the impression of the types makes a stencil. This stencil is transferred to the Cyclostyle printing frame, and many copies of a more or less excellent reproduction of typewriting can be executed from it. If the successive steps of the process are well performed, the result will be satisfactory ; but it takes some experience to prepare a clearly defined stencil, and to print from the same with invariable success.

(82.) Many duplicates can also be made by use of the Hectograph ribbon, which writes copy that can be multiplied upon the gelatine (Hectograph) pad. The so-called lithograph ribbon also produces copy that can be transferred to stone, from which many reproductions may be printed.

(83.) Some operators have two ribbons on the reels at the same time, copying and non-copying ; and for the execution of fancy writing a variety of colored ribbons of short lengths may be pinned together, and used as occasion may require.

(84.) When directing envelopes, or writing the superscription of a letter, print the name or names in capitals (which is easy to do if one has a knee-shift), and the remainder of the address in lower case,—city or town, county and state, in the order named. If there be street number or postoffice box, it follows the name, in lower-case, next below.

(85.) To direct envelopes rapidly, have the Envelope-holder, and insert more than one between the rolls at once; at the same time giving the roller lever a certain number of lifts as each envelope is inserted, so as to bring the first one to the proper line for printing—this to be decided by the size of the envelope and the length of the address. When one is written and removed insert another, give the roller the requisite number of turns, and the envelope next to be written upon will come round to the proper place.

(86.) When writing half space between the lines it adds to the appearance of the page, and to legibility, if full space be made between paragraphs.

(87.) Write the body of telegrams, cablegrams and the like, in capitals. It adds to the general effect of legal documents to write attestation clauses, affidavits, acknowledgments, citations of law, etc., half space.

(88.) After a ribbon has become somewhat worn and curled, it can be turned to advantage. To economize the ribbon, adjust so that the type will strike along the edge nearest the operator; and when this part is exhausted, move the ribbon over so as to utilize the unused portion.

(89.) To write a title or sentence equally distant from the margins, count the letters (and spaces) in the phrase, subtract this sum from the amount total of the machine scale, and divide by two. The result will be the figure on the front scale at which the writing should begin.

EXPEDIENTS AND DIRECTIONS.

(90.) The owner or operator of a typewriter should possess some mechanical ingenuity to make his machine work always at its best. We are ungallant enough to record the fact that lady operators rarely understand how to take care of the machine. We add, however, that this is not a fault, but due to the misfortune that their training does not lead in that direction. But the typewriter is not complicated, and it is of advantage to the operator to have a full knowledge of its peculiarities; he should know his own machine at least, learn to adjust it to his own touch, watch and tend it carefully, and so make it more of an assistant to him than it can be to any other person.

(91.) For persons who prefer a knee-shift at the right (like an organ swell) we suggest the following, which we have used many years with entire satisfaction: Buy at any hardware shop a 6-inch half-strap hinge and a 1½-inch screw-pulley. Insert the pulley at the left of the table drawer, and the hinge at the right so as to clear the iron

legs of the table. Bore an inch hole through table and base-board, attach a strong cord to the shift-key bar where the pull comes, pass it through the auger holes, over the pulley and to the right, attaching to the pendent hinge. Screw a piece of wood to the hinge for a knee brace, and the result is a cheap and effective capital-shift arrangement that works easily, surely, and does not wrench the machine.

(92.) An old machine will write out of alignment because of wear, apart from that of the type mechanism; but single types will sometimes get out of line in a comparatively new machine. To remedy the fault procure a pair of aligning pliers, and proceed as follows: After establishing a standard, as, for instance, n, o and i, make i strike through the exact center of o. compare the letters that have lines in common, (h and n, O and C, o e c b d q p, i t l j f, etc., are examples,) and those of a series should coincide, or be made to, in the greater part of the outline. With a correct basis established, it is not very difficult to study out the alignment problem, though it is best to experiment on an old machine. To align rapidly and well requires considerable experience, and it is, of course, better to employ an expert.

(93.) It will be found, when practicing by touch, that the key in the upper right-hand corner, marked "LOWER CASE," is often in the way. We have never discovered any particular use for this key, and of late have removed it, because of an occasional collision with the little finger.

(94.) Never allow a typewriter to squeak for want of oil; neither pour on oil when it is unnecessary. It is not difficult to find where oil is needed, though now and then there will be an elusive squeak.—possibly that of a key-bar-spring under the back part. Tip up the machine and run the nose of the oil-can down all the springs; or find the noisy one, and lubricate that. Another exasperating one to find is that of the front carriage-rod which the shift-key governs. Sometimes, too, the top of the cog arm (spacing rack) at the back will rub against its guard, and cause a squeak.

(95.) The mechanism that governs the ribbon movement should be kept clean and well oiled. This works by indirect influence of the carriage tension spring, and it is essential that it should act freely so as not to impair the carriage motion.

(96.) Benzine is handy to have, not only to clean the types but to thin the oil in the lubricated parts. It is wise to apply benzine once to oil twice.

(97.) The types may be cleaned just as they lie in the basket; for this purpose use a stiff hand-brush of good size. When the ribbon is new, if e C c O o B b D d s g 6, etc., become filled, lift the types and remove the dye (dirt) with a pin, or by tapping the brush against them vigorously.

(98.) Care should be exercised to have the carriage and finger-action tensions reciprocal. If the carriage-spring pulls too hard, the cogs will not let go readily; if the dog-spring is too stiff, the cogs are held unduly and the carriage obstructed. The carriage spring should be regulated to the least possible power to pull the carriage along as rapidly as each key is depressed, and the key and space-bar tension adjusted to "second the motion."

(99.) When many sheets are run into the machine, with carbon paper between for reduplication, the alignment of the printing can be maintained by stretching a wide rubber band upon the track of the front carriage wheel; the added thickness of paper adds to the diameter of the roller, which alters the relation of the type-bars to the same, and makes it necessary to lift the carriage a trifle.

(100.) Rubber bands may also be stretched across the top of the type-basket to keep the ribbon from curling. Have a care to adjust the band so not to cause friction with the ribbon movement.

(101.) To renew the rubber feed-bands, loosen the screws holding the axle of the front band-wheels, also the screw of the left scale-arm support; then slip off the bands through the openings made. Be careful when returning the axle-rod to set the screws tightly, but not spread the carriage frame to the extent of impeding its movement.

(102.) It is not generally known that a letter-key and the capital-shift can be struck at one and the same time to produce a capital. Try it, and save time!

(103.) The manifolding power of a writing machine is of prime importance.* Literary workers should always prepare MSS. for publication in duplicate; then if the original be lost in transit, or if it be rejected by the publisher and not returned to the author, the latter will have a copy at hand.

History has furnished many instances of the destruction in a moment of the labor of years. We have an acquaintance, an astronomer, who lost his whole computation of a Transit of Venus by fire, and was obliged to work many months to calculate another. The effects of the Chicago and Boston fires have lasted long after, because valuable records and papers were burned, and no duplicates exist anywhere.

(104.) In order to make the underscore double, after striking it as usual, draw the shift-rod (front) a little toward the operator, and while holding it firmly—proceed as before.

(105.) In taking letter-press copies of typewriting the tissue sheet should be moistened more than for ink writing. Many press copies can be taken from the same writing, if the ink be plentiful and the tissue thoroughly wetted. Such copies are convenient when the making in duplicate of a long letter has been overlooked.

* Some offices file away carbon duplicates of letters instead of taking press copies.

(106.) New attachments for the typewriter are constantly appearing; those of recent origin are,—the thumb-screws for regulating finger and dog tensions: the improved dog that allows the carriage to be pushed back without raking the teeth of the spacing-rack: the arrangement at the left for lifting the spacing-rack, and allowing the carriage to be set at any point on the scale—(being in addition to the right-hand thumb-piece for the same purpose): and the various knee-shifts.

We predict the invention at a not distant day of a device to return the carriage to point of beginning, turning at the same time the roller for a new line. All such improvements, if of a practical character, tend to equip the machine for exceedingly fast work—and perhaps for verbatim reporting, if of a not too exacting kind.

ADDITIONAL REMARKS.

(107.) A very fair estimate of the number of words in a page of manuscript can be made by reckoning twelve (12) words to the line, and multiplying by the number of lines.

(108.) Degrees, minutes and seconds are represented by the lifted o, as °, ' and ". In real estate abstracts, architectural specifications, etc., feet and inches are often made—' and ".

(109.) In a description of Real Estate the language is about as follows: N. E. 1-4 of the S. W. 1-4 of Section 3, Township (Tp) 10, North Range, etc. A descriptive outline in such connection can be written like this:—



(110.) Printers prefer to have MSS. Commercial Note (5 3-4 x 8 1-2), though this size is not so convenient for the typewriter as Letter-size. The legibility of the "copy," however, ought to compensate the compositor for the trifling increase in the dimensions of the page.

(111.) When writing correspondence the operator should paragraph as the sense demands. We have in mind letters received from legal and other correspondents, which exhibit no paragraphing at all, and the effect was far from agreeable.

(112.) Many familiar words like could, would, should, are capable of abbreviation, and can be shortened when occurring at the end of the line, and there remains no space for proper use of the hyphen. In purely informal correspondence it is not uncommon nor objectionable to see wd, cd, shd, yr, etc.

(113.) When writing many circular-letters of the same tenor, it is often the custom to prepare one for the copy-book : then write a list of the names written to, for copying on the next page of the letter-book, with this heading,—“Circular as per foregoing page sent (date) to the following :—”

(114.) In telegrams and cablegrams write all numbers in letters, and never divide a word at the end of a line ; rather pass to the line next below.

(115.) The typewriter amanuensis should be, to all outward appearance, as senseless as the machine when private matters are being discussed ; and wholly uncommunicative when his or her employer's business may be alluded to outside of the office.

(116.) Mr. J. S. Campbell, of Cincinnati, has devised a scheme of typewriter shorthand which is ingenious, and ought to be effective.

(117.) The motive power of the hand sometimes perverts its action, and in the spelling of words the letters often become transposed. This is perhaps a result of nervousness, or may be taken as an indication of overwork. The best of writers occasionally have days when the spelling of the commonest words is a little tangled.

(118.) The acute accent can be represented by holding the space-bar down while striking the apostrophe and the letter to be accented, as é. The cedilla is made by holding the space-bar in the same manner while striking the letter and the comma, as ç.

(119.) A perfectly straight line can be written horizontally across the paper by shifting to upper-case, setting it firmly, depressing the underscore key, or hyphen, and drawing the carriage forth and back once or twice without revolving the roller. With the carriage in normal position, depress letter l or I, and a vertical line of the same character can be produced by turning the roller with the fingers.

(120.) To write on the very extreme of the bottom margin, attach the paper to a backing-sheet that extends far enough below the copy to come behind the roller-scale. Use the so-called “Newspaper Pins” to hold the sheets together. When it is desirable to write vertically on the side margin, take the paper out, fold, and proceed as usual. Of course it is unprofitable to take this trouble except in extreme cases.

(121.) If a typewriter is left idle for a great deal of the time, it is best to cover with a cloth, for a dusty machine has an untidy look. A yard and a half of brown cotton-flannel makes a tasty covering.

(122.) To erase typewriting without marring the rest of the page, lay a piece of tough paper alongside the place to be scratched ; or, if more convenient, cut out a part of the overlay, and place upon the work so that the erasing tools can touch no other part.

(123.) The typewriter can be of great assistance to the telegraph operator (Receiver), especially for the receipt of press dispatches. It is used quite extensively now ; but when a practical carriage-return device is invented, we may expect to see the writing machine much more effective in this connection.

(124.) To erase typewriting, first scratch the paper a little with a sharp knife-eraser, and then rub smooth and clean with the so-called "Typewriter's Eraser," which has some grit to it. The ordinary rubber eraser will not answer.

(125.) If the thumb be allowed to remain upon the space-bar, any key can be struck many times without movement of the carriage. Consequently the impressions pile one upon another, and serve to make the print more distinct. Combination characters are made in the same way, such as ç, ç, é, Ë.

(126.) An operator furnishing a machine should receive at least two (\$2) dollars a week more compensation. Some concerns that use many typewriters require employes to provide each his own, so as to insure better care of the machines, and hence, better work. There are employers, also, that require this on less defensible grounds.

(127.) A signature may be typewritten, it may be affixed with a stamp, or it may have been set in type and imprinted from that,—and each and all are recognized as legal. The principal objection to a signature thus made is the difficulty of proving the author of it, in case any question should arise. The pen-written signature has individuality, and for many reasons adds weight wherever it appears.

TYPEWRITER INSTRUCTION BY MAIL.

(128.) The paragraphs of this Manual are FIGURED, so they can be referred to in detail if it be desirable to give instruction BY MAIL.

(129.) After the pupil has procured a machine the first duty should be to read and understand the book of directions accompanying the same, so as to thoroughly comprehend the mechanical workings of the instrument before directing hand to the key-board.

(130.) The teacher may assign tasks adapted in length to the requirements and ability of the learner, who, in turn, should forward all work to the instructor for correction and comment.

(131.) Typewriting can also be easily acquired by SELF-INSTRUCTION, if the directions as herein set forth be faithfully followed. There exists no reason why proficient typewriter operators, according to the most practical method, cannot be the result of painstaking study of just this little volume.

LONGHAND ABBREVIATION.

(132.) Acting on the belief that there was a need of a practical method for shortening longhand, a committee of eight was appointed at the London Shorthand Congress, some time since, to consider the problem of devising a uniform code of contractions to be recommended for general use. The list on following page was reported by this committee.

It was found, upon investigation, that the larger part of this list was in use in the principal newspaper offices in London, and, accordingly, the chief labor was to regulate occasional discrepancies and bring the whole into tabulated form.

(133.) For the convenience of the typewriter it is suggested that the terminations indicated by the superior letters be separated by the hyphen, as xtr-y, for extraordinary, or fur-r for further; and the hyphen may be omitted in words like wd, shd, yr, bn, wh, etc.

The auspices under which this list was prepared ought to vouch for it, and to such as need a system of longhand abbreviation this ought to be exceedingly useful.

Standard List of Contractions.

WRITTEN.	PRINTED.	WRITTEN.	PRINTED.
/	the	xtry	extraordinary
t	that	ev ^s	evening
f	for	ev ^y	every
o	of	f ^{ro}	from
h	have	fur ^r	further
y	you	gen ^l	general
w	with	gov ^t	government
r (above the line.)	termination "ever"	g ^t	great
g (above end of verb.)	as how ^r , which ^r , when ^r , wher ^r ,	h ^d	had
n (above the line.)	"ing," as com ^s coming.	imp ^{ce}	importance
ce (above the line.)	termination "tion," "sion," or	imp ^t	important
m ^t	"ion."	lge	large
omit "day" in days of week.	termination "ance," "ence," termination "ment," example : "Mon," Monday.	mt ^s	meeting
		m ^t	night
		m ^s	morning
		notw ^s	notwithstanding
		obj ^s	objection
		o'clock	o'clock
		op ⁿ	opinion
		opp ^y	opportunity
		o ^r	other
		o ^t	ought, ^{alone, or as termina-} ^{tion, as}
ab ^t	about	bro ^t	brought
acc ^t	account	tho ^t	thought, etc.
aft ⁿ	afternoon	part ^r	particular
agn	again	q st	question
ag st	against	s ^d	said
am ^s	among	sev ^l	several
am ^t	amount	sh	shall
bec	because	sh ^d	should
b ⁿ	been	th ^r	their, there
b ^{twn}	between	tho	though
c ^d	could	thro	through
ch ⁿ	chairman	toget ^r	together
circ ^{ce}	circumstance	v ^y	very
com ^e	committee	wh ^r	whether
dif ^{ce}	difference	w ^h	which
dif ^t	different	w ^t	without
dif ^{elt}	difficult	w ^d	would
dif ^{culty}	difficulty	yest ^y	yesterday
		y ^r	your

PUNCTUATION MARKS.

(134.) Some one has remarked that common sense ought to decide the meaning of a sentence without punctuation. That is taking a little too radical view of the matter, but it is nevertheless true there is much superfluous punctuation, and an overabundance of rules for the same. However, punctuation is here, and has come to stay ; therefore the next best thing is to have common-sense rules for the guidance of the writer who has not time nor inclination to study technicalities. In conversation the sense is indicated by

inflection of the voice. It would seem to us that a common-sense statement of the province of PUNCTUATION is, that the stops should so divide sentences as to simulate the conversational style—of course giving due prominence to grammatical relations.

(135.) THE COMMA is used to set off any part of a sentence that has a sort of grammatical completeness of its own. There is a homely rule current,—that a clause which can be taken away without impairing the grammatical structure of the whole should have a comma before and after.

Too many commas are worse than none. Many and comprehensive rules are to be found in works on punctuation, but where opinions differ as to the use of the comma, the best guides to follow are—the requirements of the sense, or the examples furnished by standard writers.

Use the comma before a short quotation. Together with the hyphen it is indicated that what follows is somewhat explanatory of the foregoing.

In typewriting always strike a space after the comma.

(136.) THE SEMICOLON marks the division of a sentence greater than that denoted by the comma. Strength is added to many epigrammatic phrases, following one another, by separating with the semicolon.

(137.) THE COLON marks the division of a sentence greater than that indicated by the semicolon.

In titles it divides the principal statement from the explanatory part. It is used before quotations of some length.

(138.) THE PERIOD marks the full stop and abbreviations, though it may be omitted in abbreviations giving the last letter of the word, as Mr Jr Dr Messrs

It is also used (instead of the asterisk) to denote an omission in a direct quotation.

(139.) In typewriting the Period has such a small face it indents the paper unduly, and, therefore, is often omitted. When omitted after initial letters an additional space should be struck.

(140.) Of course in legal matter the period should be employed, and in correspondence not purely informal: the above suggestion is not intended to raise any question as to the *propriety* of using this mark at all times.

(141.) In the execution of fancy typewriting the period makes a neat horizontal border; while the colon furnishes the vertical equivalent. The period and hyphen are common in tabular work to point to figures.

(142.) THE INTERROGATION POINT marks the direct question. When placed within the parenthesis (?) it denotes irony, or that some doubt exists regarding the foregoing statement. Used in this way it can also be made valuable to explain (?) a written joke.

(143.) The EXCLAMATION POINT is written after interjections, and may be sparingly used to denote wonder, contempt, emphasis, etc. Also is put after questions that are more exclamatory than otherwise.

(144.) THE APOSTROPHE marks the possessive case and omissions ; also a quotation within a quotation.

(145.) THE PARENTHESIS calls for no remark. In distinction from the parenthesis the brackets are used to include interpolations, corrections, notes, etc.

(146.) In typewriting make no space between the parenthesis and the word enclosed.

(147.) THE HYPHEN marks a divided word at the end of a line, compound nouns when the second implies the act of containing the first, as wood-box, tea-kettle ; also compound adjectives, as dark-eyed maiden, half-dead-and-alive condition. Also used in names to denote the omission of some letters ; to separate vowels that do not form a diphthong ; and to divide numbers written in words.

(148.) THE DASH (M-dash), made on typewriter by three hyphens, marks a sudden transition of thought, or change in the structure of a sentence, or when a phrase is purposely left unfinished. Also instead of parentheses or brackets with equal effect.

It also denotes hesitating speech, and is convenient to represent rhetorical effects not describable by other stops. Some writers use the dash indiscriminately, when apparently in doubt regarding the punctuation.

(149.) CAPITALS are used as follows : At the beginning of a sentence, the first word of a line of poetry, the first word of a direct question, and the first word of a quotation. Also at the beginning of proper nouns (names of cities, rivers, towns, counties, States, persons, etc.)—names of divinity, titles, and words of prime importance in special matter.

FURTHER REMARKS.

(150.) Make no period after *nd*, *st*, *th*.

(151.) Do not use *Oh* before the vocative case (case of address.)

(152.) Do not use the comma when doubtful how to punctuate ; employ the M-dash, or nothing at all.

(153.) Do not omit the comma before and after—However, In short, Indeed, Too, Therefore, To a certain extent, Moreover, etc.*

(154.) Do not underline too freely in a piece of writing; rather have your language strong enough to sustain itself. A word typewritten in caps attracts more attention than underlining, where *attention* is desired.

(155.) Do not correct errors extensively in the body of a MS.; use the margin.

(156.) Do not use quotation marks too freely, and if one is written be sure and write its complement.

FURTHER SUGGESTIONS.

(157.) The characters for mathematical representation can be evolved from the ordinary key-board by calling &—plus, x—the sign for multiplication, two hyphens (--) for the minus sign, the ÷ (made by hyphen and colon) for division, and two hyphens for “equal-to” (=), one in normal position and the other lifted, in the manner described in paragraph 49.

(158.) When making a manuprint of a drama, or the words of an opera, the dialogue is usually written at the right of the page, leaving an exceedingly wide margin at the left, in which all the directions for stage “business” are to be written.

(159.) Poetry is very prettily written by the typewriter, due attention being given to the proper indentation of the lines as regulated by the rhythm, etc.

(160.) An address for public delivery may be advantageously written by machine all capitals, with double space between the lines,—for the more conspicuous setting forth of the matter.

(161.) In letter writing use a blank sheet, that is, without letter-head, for second and subsequent pages.

(162.) On machines having no Section-mark (§) that character can be made by one lower case s above another. This is done as described under the head of numerals (§ 48).

*Allardyce says the tendency is against such punctuation nowadays; we heartily wish the “tendency” would become a settled fact.

NOTE.—Bigelow's “Handbook of Punctuation,” 50c., Wilson's more extensive work, \$1.50, and Allardyce's “Stops” are excellent for reference if the pupil desires more definite rules for punctuation.

(163.) Letter B and figure 6 are on what might be termed neutral ground, and the index finger of either hand can be employed as the situation may demand.

(164.) When there is an enclosure to accompany a letter it is well to imprint the word "ENCLOSURE" in the lower left-hand corner of the signature page, for the convenience of the mailing-clerk. This may be done by machine or a rubber stamp.

(165.) A letter to be registered should have the word "REGISTERED" written just above the address—to the left of the date ; or elsewhere if preferred.

(166.) When indexing the Letter-book, it is the common practice to enter the names of correspondents in the index pages at the beginning of the book, in as near alphabetical order as possible, and then add the page numbers consecutively ; at the same time recording with blue pencil upon the page with the letter itself the page-number of the last previous letter to the same correspondent—and vice versa.

(167.) There is no security in filing papers away with only a rubber band to hold them, as the rubber soon loses its strength. It is better to fasten with a tape, and the Crown File Band, which is a new fastening of this character, is inexpensive and effective.

(168.) The well equipped office should have a stock of thin paper, on which is the regular imprint, for making duplicate copies. Also blank sheets of the same for second and subsequent pages of a letter. These blank sheets are also convenient to make copies of letters received, because being light weight they can be enclosed with other pages without adding much to the postage.

(169.) Typewriter operators who may be afflicted with myopia (short sight), should have glasses with a double lenses, one with a long focus, and the other with a focus of about 18 inches, which will take in the key-board of the machine and the note-book on the table by its side. The writer has used this style of glasses for some time, and likes them exceedingly.

(170.) Dumb-bell and club practice is good for the operator who gets weary because of long sittings at his machine, and we have found bicycling an excellent antidote for office fatigue. Persons of sedentary habits should be mindful of the importance of exercise, if they expect the functions of the body to work properly.*

* PUBLISHER'S NOTE. Many business offices have one of Dowd's "Home Exercisers," which is considered the best means for physical exercise ever devised, and is specially useful to sedentary people. Price, with book, \$8.00.

(171.) Keep carbon paper in an air-tight tin box, specially made for the purpose, and buy it in small quantities if drying up cannot be prevented.

(172.) The corresponding secretary should be prompt in the execution of all typewriting committed to him, and, if any discretion is expected of him, immediate answer should be made to all letters confided to his care. He ought to watch the mails closely, and see that all matter is dispatched at the earliest possible moment.

(173.) Upon beginning the second page of a letter, if you are using paper with letterhead imprint, take another sheet of same (or as per ¶ 161)—only write upon the reverse side. Indicate at the top the page number and name of party written to. If the first line of such a page is incomplete, do not paragraph, but complete the line; violating in this case the rule to paragraph.

(174.) When a quotation is to be written within a letter, it can be made to stand forth conspicuously by writing it half-space. Make a full-space division between paragraphs of a quotation thus written.

(175.) In a business letter of a more or less formal character, figures are more properly written in words than to express them by the Roman signs.

(176.) A great many letter writers begin by giving the date in this wise—October 15th, 1891. This is not correct, the *th* should be omitted; likewise *d*, *nd*, *st*, in the like situation.

(177.) When preparing a stencil for a duplicating process it is sometimes wise to rough out the matter on another sheet, marking the principal points from the scale to be remembered, and then the work can proceed quite rapidly. Or, if the matter is to occupy a certain space, take measurements and indicate same on the stencil paper with little lines or dots of red ink, which will define the limits within which the matter can be typewritten.

(178.) After a perfect copy has been made, if it is somewhat intricate, mark a specimen with the most essential scale numbers, and preserve for future reference, if there are likely to be wanted more of the same kind.

(179.) It is best to run the eye over figure work, and correct same before removing the stencil from the machine. If quick printing be required, strips of tissue paper may be pressed upon the undried varnish usually applied to the stencil, and the work proceed without delay.

(180.) When preparing to print with the Mimeograph, Cyclostyle or Necstyle, arrange for the paper adjustment as follows : Space the right or left margin according to the longest line in copy, and the top or bottom margin by following vertical rows of letters ; or, in tabular work, a perpendicular line of figures. Use the paper to be printed upon, or a rule, for this purpose. Mark the adjustment with pencil on the blotter-pad that should cover the platen, and it is ready for feeding the paper. Roll the ink in gradually, remembering that it is only necessary to thoroughly saturate the fiber paper next to the roller. After this is inked, but little is needed to make good impression.

(181.) Avoid heat when using the Mimeograph. If the machine is placed on a shelf over or near a radiator the work will be ruined. In a room heated to seventy-five or eighty degrees the stencil will not print well. This, we think, is due to the softening of the coating of the stencil paper. In a temperature of sixty to sixty-five degrees the device works nicely, and is an excellent way of reproducing typewriting.

(182.) A facsimile signature, or the introduction of characters not typewritten, can be made by transferring the stencil to the writing surface provided for pen work, and filling in with the pen ; exercising some care, of course, as the stencil paper is almost too thick for such writing. (See p. 70.)

(183.) Speed in typewriting depends somewhat upon the temperament of the writer, and we might add with truth, the condition of his machine. At the outset the typewriter should be properly adjusted and in good order ; that almost goes without saying. Then a good method of procedure is an important requisite ; it is obvious the all-finger method has superior advantages. Typewriting from dictation is most conducive to fast writing, provided the above considerations are given due weight, and the dictator has a proper idea of the matter. Good dictating is an acquirement ; the person essaying it should understand something of the capacity of the machine and the ability of the operator, and also pay due attention to sentence construction. There should be the right division of sentences, natural phrases should not be broken, the sense should be made clear, the enunciation be distinct enough to be heard above the click of the machine, and a close watch be had upon the movements of the writer, so as to keep well behind, or not too far ahead, of the work. The best writers are not infallible as to slips of fingers or attention ; but with a dictator in sympathy with the operator comfortable progress will be made, and the most rapid of all typewriting result.

(184.) When copying, the operator should read and remember as much of a sentence as he can, retaining it in mind until the same is transferred to print. The habit is a bad one of writing one word at a time, and nervously turning the head back and

forth from copy to keyboard. Facility of touch writing will effect an improvement in this respect. Frequent lifting of the carriage is also very much a habit. The cultivation of accuracy in writing, and confidence in the same, will tend to overcome this.

(185.) It is considered by many as being more convenient to place the notebook flat upon the table, and dispense with the machinery of the elevated copyholder, because the eyes move with greater ease from keyboard to copy if both are in nearly the same plane.

(186.) Continuous writing is quite practicable from clear and legible copy. Skill in thus writing is valuable to have, and it may be attained by something like the following practice: Write slowly, taking in with the eyes whole phrases, looking away from the machine when words occur that are easily fingered, or when there is a common termination like *tion*, *ment*, or *ing*, or familiar material of any description, utilizing this opportunity to look ahead upon the copy, and store up words, phrases, or whole sentences for the next step in the process. If the all-finger method is carried out with considerable exactness, it is not difficult to acquire facility in continuous writing.

(187.) A typewritten will should cover both sides of the paper, so as to leave no blank space for the admission of fraud.

(188.) Contracts should be very carefully written. The first and last names of the contracting parties should be written in full. The provisions of the instrument should be paragraphed in good style, and sums of money written in both words and figures. Rates per cent, if such there be, should also be written in both words and figures. Erasures are not permissible, generally speaking, and if made (or any change of like character), attention should be called to it by a clause like the following: "The word (or words) so-and-so in lines so-and-so substituted (deleted, interpolated or erased) before execution." Contracts are made in duplicate, triplicate, etc. This may be done by manifolding with carbon paper, but each part looks better if written by itself. It is hardly necessary to add that when so written great care should be exercised.

(189.) The beginner who is endeavoring to gain a knowledge of typewriting can derive a great deal of instruction and example from the high-class magazines, which are fine specimens of typographical style and accuracy.

(190.) When the carriage is switched to upper-case, and fixed there by the cylinder shifter, a lower-case character can be quickly made by pulling the front carriage rod

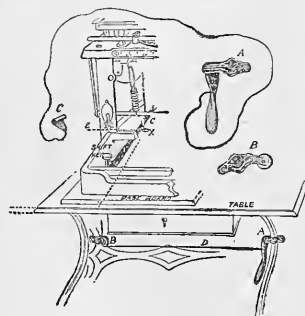
forward temporarily with the fingers. This is convenient for making a hyphen or comma when writing all capitals.

(191.) If an omission has been supplied by writing between the lines, and a caret is needed, wait until the page is written before removing the paper. Then replace in the machine upside down, carefully adjust, and print a lower-case *v* where the caret should appear.

(192.) Sometimes a letter is omitted, and there is no gap in the word to tell the story. To supply the letter, adjust the pointer so as to come half way between the scale marks of the letters each side of the one required, bring the cylinder forward with the fingers at the same time while holding the pointer as above described, strike the letter, and the impression will be made just above the place desired. If the apostrophe is wanted, shift to upper case, adjust the pointer in the same manner, and proceed as before.

(193.) It is always wise to compare typewriter copying with the original, and essentially so if it is work of some difficulty. If one can read to another, what is ordinarily an irksome task can be easily disposed of. Do not deface the page with blue pencil marks in an editorial hand, but make a small cross in the margin with a soft pencil, which can be entirely erased. Then, if the corrections be ingeniously made, the page will be saved.

(194.) When typewriting matter for the telegrapher it has often been the practice to omit words, like *the*, *a*, *and*, *an*, etc., which could be filled in by the news editor at the other end of the line. Of late some newspaper offices have abolished this custom; probably for the reason that under a favorable tariff of rates it is more profitable to have such matter wired in full.



(195.) To make a word, title, or phrase occupy a given space, in addition to following the instructions of paragraph 89, much can be accomplished by ingenious spacing, not only between words but sometimes between letters—after the manner of the compositor justifying his lines.

(196.) The author has recently improved the knee-shift referred to in paragraph 91, as will be seen by the above illustration, and it is now for sale. A practical de-

vice for operating the upper-case key independently of the fingers is of great assistance in the promotion of all-finger procedure, and graceful writing generally, and we recommend this arrangement without reserve as being entirely effective.

(197.) Practice in the use of the two scales can be had by omitting a letter here and there, and returning to insert the same. This is harder to accomplish if the paper has to be readjusted (as after removal), and to insure success the cylinder scale must be made even with the alignment the entire distance across the page. This can be done by writing a line, turning the roller backward a full space, and then adjusting the scale by the screws. When the proper relation is established between the letters and the marks of the scale, corrections and insertions can be readily made.

(198.) The following constitutes a key to the less obvious of the fancy borders :

Page 66, line 3, AV X

“ “ “ 5, O() -

“ “ “ 9, AV Q'

“ “ “ 14, oi

“ “ “ 21, AV O

Page 67, line 2, o/ OI

“ “ “ 8, bq/-

“ “ “ 13, / o—

“ “ “ 18, / lo—

“ “ “ 19, oi- X-

(199.) In further reference to aligning (§ 92): a letter should be corrected with reference to the top as well as the bottom, and treat one letter at a time. If the readjustment is made with the screwdriver, be sure and set every screw firmly at the last. It is a good plan, if a new machine has been transported some distance, to ascertain by trial if every screw is tight ; but a person unfamiliar with the mechanism, or with the use of tools, should not trifle with the machine.

(200.) The long and short accent marks (ō, ā,) can be made (1) by treating the hyphen according to paragraph 48 ; and (2) by holding the front carriage-rod so that only the lower part of figure 6 will make an imprint, as may be observed in the first specimen of facsimile, page 55.)

(201.) For practising and strengthening the left little finger, the following lines will serve:

“ Wars arm all ranks, all hearts, all crafts appal;

At Mars' harsh blast arch, rampart, altar fall.

Ah! Hard as adamant, a braggart Czar

Arms vassal swarms, and fans a fatal war.

At that bad call a vandal band

Harass and ransack Wallach-land ;

A traitor phalanx Balkan's scarp hath passed,

And Allah's standard falls, alas, at last.”

(202.) Practice for the fourth finger of the right hand can be had by writing the nursery jingle—"Peter Piper picked three pecks of prickly pears," etc.

(203.) In addition to paragraph 13, alphabet practice can be found in those specimens of writing, of which the following is an example :

"And I, even I, Artaxerxes the king, do make a decree to all the treasurers which are beyond the river, that whatsoever Ezra the priest, the scribe of the law of the God of Heaven, shall require of you, it be done speedily." (Ezra, vii: 21.)
—which contains every letter of the alphabet. Other examples are not difficult to find among curiosities of composition.

(204.) The *Writer* says: "The prejudice of most editors in favor of typewritten copy is so strong that no writer who can afford to own a typewriter should be without one." This is a hint to literary workers from good authority.

(205.) The word "*typewritist*," signifying a typewriter operator, has of late gained some currency among the unthinking. The Century Dictionary defines *-ist* as "a termination of Greek origin existing in many English words derived from the Greek or formed on Greek analogy, denoting an agent (one who does or has to do with a thing), and corresponding usually to nouns in *-er*, with which in many cases they interchange. In vulgar use words in *-ist* are often employed humorously, or for the nonce, where properly only *-er* is permissible, as in *shootist*, *singist*, *walkist*, etc., for *shooter*, *singer*, *walker*, etc."

Write, being an Anglo-Saxon word, should hardly attract to it the Greek termination *-ist*, and the word "*typewritist*" does certainly have a vulgar sound, and grate unpleasantly upon the ear. We hope it will not pass into general usage.

(206.) When a copy of any writing is made upon the typewriter, indicate the character of the transcript by the word "COPY" at the top of the page; and if signatures occur, write the word "SIGNED" in parenthesis before the same. The value of a copy for legal purposes lies in its being exact, though in a business house copies of badly written letters are often made as they should be, *i. e.*, with correct spelling and punctuation. It is not always advisable to perpetuate an error.

(207.) A thorough cleaning and oiling of the typewriter is greatly facilitated by removing the back rod. This is easily done, and while the carriage is detached, the wheels, bearings, teeth, etc., become more accessible.

(208.) Style in typewriting embraces a great many desirable features. There is something in the *manner* of the operator—in his attitude before the machine. A stooping, unbusinesslike posture has an ungraceful look, and departs from style.

(209.) The way the keyboard is manipulated constitutes an important attribute of style. There are persons who make piano playing a most graceful performance, while, on the other hand, extreme awkwardness characterizes the simplest movements of others, and no thought of style enters into consideration. We say a certain person upon the street is stylish because the *tout ensemble* of his appearance is due to careful attention to the items of dress and demeanor that have a part in the general effect. The typewriter operator can cultivate style by taking heed of the little details that go to make correct and good looking procedure.

(210.) Erect figure, easy arm, hand and finger action, and a dignified behavior generally, should be practised by the writer in the effort for a stylish bearing.

(211.) When it comes to style in the arrangement of the matter written, there is a wide range for suggestion. Above everything have the machine in such good working condition that no visible effort is manifested in its manipulation. Do not be obliged to pound the keys with a sledge-hammer touch, or pull the carriage back to place with the swing of a giant. The muscular method of manipulation has had its day. Have but little flourish about your finger movement; no occasion can be found for striking keys *in alt.* as in music; there are no harmonics in typewriting.

(212.) Do not let the letters pile one upon another, or spaces be lacking when most required. Spell correctly, of course, and punctuate, having the reader in mind. Be tasteful in the arrangement of matter, whether it be a simple letter or more elaborate writing. Paragraph at the proper time, whether in obedience to the sense of the subject or to the appearance of its presentation.

(213.) Be vigilant to observe the commoner rhetorical rules. As stated elsewhere, good models of typography are furnished by the high class monthlies. If the operator has ever stood at a printer's case he has won experience in a good and practical school.

(214.) Remember that plain print has a most cruel way of exposing errors, and nothing betrays the want of capacity in a writer so much as the writing itself. Therefore study the acknowledged standards of fine writing, and then strive to make your own work exhibit those almost undefinable traits which may be characterized by the word—style; not style of composition from a literary standpoint, but its mechanical aspect.

A CHAPTER IN FACSIMILE.

Examples of Titles, Backings, Captions, Legal Forms and Otherwise.
A Variety of Fancy Borders, Tail-Pieces, and the Like.

The following pages consist of a facsimile reproduction of actual typewriting. There is hardly a limit to the variety of combinations that can be made from the characters of the typewriter, and those following by no means exhaust the resources of the machine.

The ruled lines in the tabular work, and much of the underscoring, are supposed to be in red ink. A very simple piece of typewriting, tastefully ruled in red, looks well because of the contrast of color.

The legal captions furnished herewith are not intended to be set as a standard, for as a matter of fact such forms are generally prepared to suit special cases and individual tastes. We hope the student will get ideas from the forms submitted, and then his eye for arrangement, and the requirements of the situation, will be his other guides.

PRACTICAL TYPEWRITING.
FORMS for COURT TRANSCRIPTS:

57

S t a t e o f M a i n e ,

County of Cumberland,

Superior Court

April Term, No.....

.....
:
:
Complainant, :
--vs-- :
:
:
Respondent. :
.....

IN EQUITY.

Argument of Mr.....
ccounsel for Respondent, etc.--

(Write law citations solid; regular argument
full space.)

In the
Supreme Court of
Illinois--Northern Gr.Div.

September Term, A.D. 1888.

-----)
Appeal from Superior Court
Cock County:
-----)

--: Brief and Argument for A P P E L L E E :--

(D E C R E E)

In The SUPERIOR COURT of Washington County.

~~~~~  
" In Chancery :-  
~~~~~

D e c r e e

E n t e r

(Signed)----- Judge.

Middle District of Indiana-----In Circuit Court for said Dist.

[illegible][illegible]

—VS—

[illegible]

ANNIE HOORN, being first

duly sworn, deposes and says---

■ ◆ ● ○ ◎ ◐ ◑ ◒ ◓ ◔ ◕ ◖ ◗ ◘ ◙ ◚ ◛ ◜ ◝ ◞ ◟ ◠ ◡ ◢ ◣ ◤ ◥ ◦ ◧ ◨ ◩ ◪ ◫ ◬ ◭ ◮ ◯ ◰ ◱ ◲ ◳ ◴ ◵ ◶ ◷ ◸ ◹ ◺ ◻ ◼ ◽ ◾ ◿ ◰ ◱ ◲ ◳ ◴ ◵ ◶ ◷ ◸ ◹ ◺ ◻ ◼ ◽ ◾ ◿

(Signed by) Annie Hoorn.

SUBSCRIBED and SWORN to before me this blank day of blank, A.D.
1834.

Handwritten notes:

SEAL

#####

Notary Public.

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STATE of _____

428

C o u n t y o f X

X

On this

day of _____ A.D. 188 before me personally came

-----to me known, and known to me to be
the same individual described in, and who executed the foregoing
instrument, and acknowledged to me that he executed the same.

(Notary's Seal)

Notary - Public.

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[illegible]

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PRACTICAL TYPEWRITING.

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----- Brockton, June 14th. 1887.

WE, THE UNDERSIGNED, agree to contribute the sums set against our respective names for the purpose, etc.

§ Names: § Amounts: § Names: § Amounts: §				
§	§	§	§	§
§	§	§	§	§
§	§	§	§	§

--) KNOW ALL MEN BY THESE PRESENTS: (--

THAT I, THOMAS WALSHINGHAM, of Weymouth, County of Norfolk
 and State of Massachusetts, do hereby constitute and appoint MAR-
TIN NICHOLS, of Abington, County of Plymouth in said State,

MY TRUE AND LAWFUL ATTORNEY,

and in my name, place and stead to demand, sue for, recover and re-
 ceive all sums of money and debts due me, and all claims and
 demands against all persons whatsoever, and to give suf-
 ficient acquittances therefor, and to adjust settle
 or compound all debts or demands, and to insti-
 tute proper suits for the recovery there-
 of, and the same to pursue to final
 judgment and execution;

AND I HEREBY RATIFY and confirm what my said Attorney
 shall lawfully do in the premises.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my
 seal this Twenty-fifth day of August, A.D. 1883.

::::::::::
 :: Seal ::
 ::::::::::

(Signature) -----

~~~~~

#####

#

# --: KNOW ALL MEN BY THESE PRESENTS :--

#

#

# THAT I, W i l l i a m D. R e y n o l d s, DO HEREBY

# constitute and appoint---

# ARTHUR J. RAMSDELL

# Attorney and Agent for me, and in my name, place and stead to

# vote as proxy at the.....

# according to the number of votes I should be entitled to if

# then personally present, with full power of substitution.

#

# IN WITNESS WHEREOF, I have hereunto set my

# hand and seal this Fifth day of March, A.D. 1888.

#

#

# Witness: WILLIAM D. REYNOLDS.

# -----

#####

\$1,000.00 Boston, May 25th, 1889.

--( AT SIGHT )--pay to the order of WILLIARD R. RENFREW

---O n e    T h o u s a n d    c o l l a r s---

value received, and place the same to the debit of---

To---Merchants National Bank,  
New York city.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 104

R E L E A S E.

: KNOW ALL MEN BY THESE PRESENTS, That I, JONATHAN KNOX, of  
: Hartford, Connecticut, for and in consideration of the sum of  
: Five Thousand (\$5,000.00) Dollars paid to me by Daniel Johnson of  
: Hartford, have remised, released and forever discharged, and by  
: these presents do, for me, my heirs, executors and administrat-  
: ors, remise, release and forever discharge said Johnson, his heirs  
: executors and administrators, of and from all manner of action,  
: and cause of action, suits or debts against said Johnson, which

## PRACTICAL TYPEWRITING.

RELEASE continued:

I ever had, or now have, from the beginning of the world to the day of the date of these presents.

IN WITNESS WHEREOF, etc. -----  
(Signed) JONATHAN KNOX.

\*  
B O N D.

-o) KNOW ALL MEN BY THESE PRESENTS (o-

THAT I, -----LAWRENCE HUTTON-----of Boston,  
County of Suffolk, and State of Massachusetts, am holden and  
firmly bound to---RUSSELL INGRAHAM----of the said City and  
State, in the sum of---

.....  
--( THREE THOUSAND (\$3,000.00) DOLLARS, )--  
.....

---to be paid to said Ingraham, or his attorney, executors, administrators or assigns; for which payment, well and truly to be made, I bind myself, my heirs, executors and administrators, firmly by these presents.

SIGNED in the city of Boston, said County and State, this 14th day of March, A.D. 1888, with my hand, and sealed with my seal.

Witness,--  
-----  
-----oOo-----

LAWRENCE HUTTON. Seal  
xxxxxx

ASSIGNMENT of STOCK.

Troy, May 1st, 1887.

FOR VALUE RECEIVED I, KENNETH TORREY, of Troy, New York, hereby assign and transfer unto Ralph W. Thomas, of Weymouth, Massachusetts,

----- TEN (10) Shares of Stock of the -----  
HUDSON, LAKE ERIE and ALBANY CANAL CO.,  
as per Certificate No 1911; and do hereby irrevocably constitute and appoint the Secretary of said Company my attorney to transfer the said Stock on the books of the said Company, with full powers of substitution in the premises.

Witness: ----- KENNETH TORREY.



1 5 10 15 20 25 30 35 40 45 50 55 60 65

Portland, Maine, January 1, 1888

M

To

| Date.  | Mfst. | Cars. | Egg.         | Stove.        | Sm.Stv. | Chest.        | Rate. | Amount.    |
|--------|-------|-------|--------------|---------------|---------|---------------|-------|------------|
| Dec. 3 | 1580  | 10    |              |               |         | 53.08         |       |            |
| 5      | 1587  | 5     |              |               |         | 27.13         |       |            |
| 10     | 1626  | 5     |              |               |         | 28.11         |       |            |
| 13     | 1639  | 5     |              |               |         | 28.14         |       |            |
| 14     | 3255  | 5     |              |               |         | 27.04         |       |            |
| 14     | 1646  | 20    | 29.08        |               | 85.00   |               |       |            |
| 15     | 3267  | 5     |              |               | 28.10   |               |       |            |
| 15     | 4364  | 10    |              | 57.15         |         |               |       |            |
| 16     | 1664  | 5     |              |               |         | 29.00         |       |            |
| 20     | 1682  | 5     |              |               |         | 28.14         |       |            |
|        |       |       | <u>29.08</u> |               |         |               | 5.05  | 148.47     |
|        |       |       | <u>57.15</u> |               |         |               | 5.30  | 306.08     |
|        |       |       |              | <u>113.10</u> |         |               | 5.30  | 601.55     |
|        |       |       |              |               |         | <u>225.64</u> | 5.30  | 1,195.89   |
|        |       |       |              |               |         |               |       | \$2,251.99 |

Received Payment,

(Sug. by Phon.  
World.)

EXTRACTS from LETTERS in Phon. Magazine:

The material required is as follows.--

Girders---G<sup>1</sup>, G<sup>2</sup>, G<sup>3</sup>, G<sup>4</sup>, G<sup>5</sup>, G<sup>6</sup>, one each;

Columns---C<sup>1</sup>A, C<sup>2</sup>A, V<sup>1</sup>A, V<sup>2</sup>A, one each;

Lattice Struts---Q, T<sup>1</sup>; Q, T<sup>2</sup>;

S t r u t s-----2-ToR, 2-ToL, 2-T<sup>3</sup>R, 2-T<sup>3</sup>L, 2-T<sup>4</sup>R;

Laterals---6-ES, 12-ED, 12-ID, 22-LI, 1-L<sup>5</sup>, 21-L<sup>4</sup>;

Gussets---12-EP, 12-ELP, 24-IP, 12-G<sup>2</sup>, 4-G<sup>4</sup>, 2-G<sup>5</sup>; etc.

-----o000o0o-----

|   |       |                        |                |                  |            |
|---|-------|------------------------|----------------|------------------|------------|
| 1 | Piece | 18" x 3/8" x 19'       | 9 1/4"         | -Invoice No 8454 | For Flaws. |
| 1 | "     | 19 3/4" x 5/8" x 1' 6" | - - - "        | " 8454           | 1/4 Short. |
| 1 | "     | 14" x 3/4" x 15"       | - - - - - "    | " 8455           | For Flaws. |
| 1 | "     | 18" x 3/8" x 19'       | 9 1/4" - - - " | " 8845           | 1/8 Short. |

0-0-0-0-0-0-0-0-0-0-0

1      5      10      15      20      25      30      35      40      45      50      55      60      65

| Y e a r .         | Av'ge No. of<br>Co's for<br>Each Period. | Net Cash Prems.<br>Received<br>Incl. Inland. | Expenses<br>Paid. | Ratio. |
|-------------------|------------------------------------------|----------------------------------------------|-------------------|--------|
| 1860 to '65 incl. | 136                                      | \$109,332,843                                | \$31,561,599      | 28/36  |
| 1866 " 70 "       | 163                                      | 227,458,782                                  | 73,045,889        | 32/11  |
| 1871 " 75 "       | 177                                      | 305,599,649                                  | 94,169,252        | 30/81  |
| 1876 " 80 "       | 281                                      | 307,198,546                                  | 108,561,299       | 55/64  |
| 1881 " 85 "       | 293                                      | 452,816,809                                  | 155,098,577       | 54/25  |
| Aggregate,        |                                          | \$1,402,406,629                              | \$462,436,616     | 32/97  |

|                | W a r<br>Strength. | Second<br>Reserves. | Final<br>Reserves. |
|----------------|--------------------|---------------------|--------------------|
| GERMANY, . . . | 2 520 000          | 1 520 000           | 1 860 000          |
| FRANCE, . . .  | 2 440 000          | 1 570 000           | 1 700 000          |
| RUSSIA, . . .  | 2 495 000          | 1 980 000           | 2 200 000          |
| I T A L Y, . . | 1 010 000          | 1 320 000           | 1 200 000          |
| AUSTRIA, . . . | 1 145 000          | 1 470 000           | 1 700 000          |
| Total,         | 9 610 000          | 7 860 000           | 8 660 000          |

ASSETS    DECEMBER    31st,    1888.

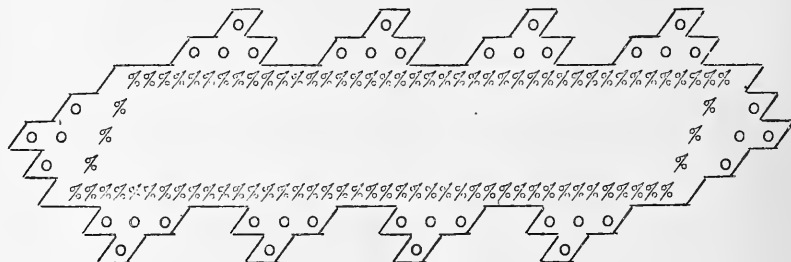
Real Estate, -- \$1,789,426 92  
 Mortgages, --- 1,174,236 90  
 Premium Notes,    345,678 21

|       | POLICIES: | INSURANCE:       | PREMIUM RECEIPTS: |
|-------|-----------|------------------|-------------------|
| 1885, | 13,961    | \$24,567,437 67  | \$670,675 76      |
| 1886, | 14,111    | 25,185,946 40    | 678,463 17        |
| 1887, | 14,478    | 25,794,195 49    | 689,897 83        |
| 1888, | 14,728    | 26,395,600 46    | 713,639 90        |
|       | 57,278    | \$101,943,180 02 | \$2,752,676 66    |





1      5      10      15      20      25      30      35      40      45      50      55      60      65



#####/

#  
# Messrs WILBUR, ADAMS & Co.,  
# 3003 Girard Ave.,  
# Philadelphia----P e n n.

///

RICHARD FOX Esq  
B o s t o n  
M a s s

$$\overline{K}/\overline{N}/\overline{O}/\overline{W} \quad \overline{A}/\overline{L}/\overline{L} \quad \overline{M}/\overline{E}/\overline{N} \quad \overline{B}/\overline{Y} \quad \overline{T}/\overline{H}/\overline{E}/\overline{S}/\overline{E} \quad \overline{P}/\overline{R}/\overline{E}/\overline{S}/\overline{E}/\overline{N}/\overline{T}/\overline{S}.$$

Mrs CHAS. FROTHINGHAM,  
#77 Marlborough Street,  
B o s t o n , M a s s .

Miss ADELIA R. CRISP,  
Sec'y Mission Circle,  
Lynchburg, Virginia.

[illegible]

To The PRESIDENT,  
Executive Mansion,  
Washington, D. C.

His Excellency,  
WILLIAM E. RUSSELL,  
Governor of Mass.

$$- \frac{1}{2} - 0 - \frac{1}{2} - 0 - \frac{1}{2} - 0 - \frac{1}{2} - 0 - \frac{1}{2} - 0 - \frac{1}{2}$$

#019 Boylstone Street,  
Boston, Mass., November 14, 1890.

Master HAROLD H. FURNESS,  
#77 Franklin St., Salem, Mass.

Dear HARRY :

Your letter of the 12th instant was duly received, and  
I will endeavor to make answer to your enquiries.

There are quite a number of details to the make-up of a letter, and the mechanics of it contribute not a little to the success of the result. For instance, every letter should be dated, and the writer's residence indicated, so that the reply will not miss its aim. You can get some idea of the form of a machine-made letter from this one; and, it being typewritten, a scale has been marked at the top, by which you can arrange the parts in good form.

A communication to a professional gentleman, say a doctor, should begin as follows,-- Dr. SO-AND-SO, or Mr. SO-AND-SO, M.D. Do not confuse this last style of address with the common error,-- Mr. SO-AND-SO, Esq., because in the latter case the mistake is in the use of TWO titles of respect, while Mr. and M.D. would hardly come under the same definition. Some of the books say otherwise, but I am not convinced.

A letter addressed to a lady requires delicate treatment. If she be a young lady, and you are certain she is unmarried, you can begin the address,-- Miss SO-AND-SO, and the letter itself,-- Dear Miss SO-AND-SO. If she be a married lady, the address should be,-- Mrs., of course, and the letter proper should begin,-- Dear MADAM. Reference is here made to letters purely formal. It is obvious that tender epistles admit of more freedom.

The contents of a letter are susceptible of some order also. Be sure and answer all queries for the first thing, and acknowledge the receipt of enclosures, if such there were. Paragraph as the sense demands, (and sometimes for looks), and be as attentive to rules of punctuation, grammar and rhetoric as circumstances will allow. If it be a business letter, make it businesslike; finish when you are done. If it is a polite communication, come to the conclusion in a graceful manner. Always be observant of the formalities---and do n't forget to sign your name.

Yours truly,

Bates Torrey.

Reproduced from

Mimeograph work.



-oO GUARANTEED INVESTMENT POLICY oO-

Age 55 :: Amount \$1,000 :: Annual Premium \$70 00 : 20 Yrs.

| (1)        | (2)      | (3)          | (4)               |
|------------|----------|--------------|-------------------|
| Cash.      | Cash.    | Life Ann'ty. | Life Ann.Paid-up. |
| \$1,531 40 | \$758 89 | \$312 00     | \$154 00 \$1,000  |

---MAINE NON-FORFEITURE LAW---

| Annual Prems pd in<br>Cash before lapse. | Ins under this Pol<br>secured for<br>Yrs: Days: | Cash due end of Ins per-<br>iod if insured lives. |
|------------------------------------------|-------------------------------------------------|---------------------------------------------------|
| 3 - - - - - 6                            | 336 - - - -                                     |                                                   |
| 4 - - - - - 8                            | 352 - - - -                                     |                                                   |
| 5 - - - - - 10                           | 328 - - - -                                     |                                                   |
| 6 - - - - - 12                           | 273 - - - -                                     |                                                   |
| 7 - - - - - 14                           | 335 - - - -                                     |                                                   |
| 8 - - - - - 17                           | 75 - - - -                                      |                                                   |
| 9 - - - - - 19                           | 187 - - - -                                     |                                                   |
| 10 - - - - - 20                          | 0 - - - - -                                     | -\$ 170 75                                        |
| 11 - - - - - 20                          | 0 - - - - -                                     | 371 85                                            |
| 12 - - - - - 20                          | 0 - - - - -                                     | 556 69                                            |
| 13 - - - - - 20                          | 0 - - - - -                                     | 725 96                                            |
| 14 - - - - - 20                          | 0 - - - - -                                     | 880 32                                            |
| 15 - - - - - 20                          | 0 - - - - -                                     | 1,020 52                                          |
| 16 - - - - - 20                          | 0 - - - - -                                     | 1,147 20                                          |
| 17 - - - - - 20                          | 0 - - - - -                                     | 1,261 11                                          |
| 18 - - - - - 20                          | 0 - - - - -                                     | 1,362 98                                          |
| 19 - - - - - 20                          | 0 - - - - -                                     | 1,453 47                                          |
| 20 - - - - - 20                          | 0 - - - - -                                     | 1,531 40                                          |

: : : : : : : : : : : : : : :

## TYPEWRITING FOR THE BLIND.

(215.) The acknowledged value of *Practical Typewriting* in no less than three schools for the blind, east and west, has given birth to the conviction that a chapter of instruction directed particularly to the blind might be appropriate in this book.

(216.) Communication with several teachers of the blind has given encouragement to the idea, and made it possible to round out the chapter to the measure it has attained. Acknowledgments are due for material and suggestions to Mr. J. W. SMITH, of the Perkins Institution for the Blind, Boston, and Supt. J. J. Dow, of the Minnesota School for the Blind at Faribault, and to the former, as a blind person, all copy has been submitted for approval.

(217.) This instruction possibly may not have a wide application, but it is presented with none the less pleasure, and we trust that for the few to whom it is addressed it will provide substantial assistance.

(218.) Also for those seeing operators, who do not find sufficient primary practice in the foregoing and subsequent pages, this chapter will supply more explicit instruction.

## GENERAL REMARKS.

(219.) The history of printing and writing for the blind is a curious one, and has extended over quite a period; but the steps of progress have been slow, and the results attained are at their best not wholly satisfactory.

(220.) Embossed printing was introduced (1784\*), and the blind were furnished with reading matter, long before they had any means of writing. A system of language representation was desired, which could be legibly written as well as easily read, and the invention of Louis Braille supplied this need by what is known as the "Braille" alphabet, being a system of dotted characters in relief very legible to the fingers. Braille's original alphabet is still used in Europe, but in this country it has been superseded by a more logical version, embodying an arrangement of dots corresponding with the relative recurrence of letters, thus falling in line with the American idea of saving time and labor.

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\*The same year it is of record that there was an instrument invented by a Frenchman for writing raised characters for the blind. In fact, most of the early inventions in this line were efforts to provide reading for the blind. Beach's typewriter (1856) is a notable example.

(221.) According to this modified "Braille" the blind are now well provided with a tangible system of writing, and it is reported that an instrument of the writing machine type has recently been produced by which the dot alphabet can be written.

(222.) This invention must be especially advantageous to the blind, for not until the appearance of the typewriter were they able to readily accomplish for themselves the writing needful for correspondence and the demands of business. To write the letters in general use involved tedious efforts to draw each character with mathematical exactness, and to print them by one or another of the appliances thus far devised was a tiresome and far from satisfactory performance.

(223.) The blind have few channels of communication with the world of light, and a pitifully small list of bread-winning occupations which persons of ordinary capacity can pursue. Their fingers are commonly the means by which they become acquainted with those doings of daily life that are sensible to others by sight. Much of their study and business must be carried on with the assistance of the seeing; hence it is that an instrument operated by the hands, which can produce legible writing for all who see, appeals most eloquently to this unfortunate class.

(224.) Furthermore, this application of the typewriter is not a visionary idea. J. W. Smith says, "I believe it is possible for an intelligent and active blind person to earn a living by the use of the typewriter," which is quite in accord with another statement of his, that "the blind throughout the country are waking up to an appreciation of the value of the typewriter, and there is no mechanical device for writing that places them so nearly on a plane with their more favored brethren."

(225.) This gentleman, whose long experience in teaching the blind gives weight to his testimony, also says that the all-finger style of manipulation is, in his estimation, the most practicable method for the blind, because it requires less movement of the hands, and, by keeping the fingers near the keys, reduces the danger of inaccuracy.

(226.) Then, too, the present interest in *touch writing* brings with it a suggestion; it being fair to presume that if seeing operators can by a logical scheme of fingering the typewriter attain some skill in a field of operation, more especially the province of the blind, those whose vision is in eclipse ought to reach equally satisfactory results.

(227.) At the same time there can be no just comparison between the two, when the details of typewriting are to be considered. Unquestionably the seeing operator has a great advantage; and in a measure the contrary is the fact. In his efforts toward

touch writing (Par. 33-36) he is reluctant to dispense wholly with sight, and is slow in gaining confidence to write by touch after the accomplishment has been acquired. Unconsciously he will write for long stretches with hardly a look upon the keys, yet being made aware of the fact he becomes confused, and bad writing ensues.

(228.) But for the blind it is always absolute touch writing ; there is no alternative. While the seeing operator, with a consistent method, acquires more or less facility in glancing away from the manual, it must be remembered that the blind are wholly in the dark, and must depend solely upon the touch. The one looks upon the letters in an absent fashion, there is apparently no conscious mental exertion ; in fact, the gaze fixed upon a point a little above the keys insures accuracy, because a certain sense of the situation comes with the slightest clue to the direction of the keys. The other sits in darkness ; there is not vouchsafed to him the least assistance toward learning the relations of the letters except by the finger tips, no landmarks except such as the sense of touch reveals.

(229.) So it will be apparent that while the procedure in both cases bears marks of resemblance, it will have to be conceded that typewriting for the blind is more difficult, the details of it require a finer treatment, and all the more important is it that for them the rules of fingering be consistent, and at the same time the general method be susceptible of ready acquirement.

#### PARTICULAR INSTRUCTIONS.

(230.) The blind person at the beginning of typewriting encounters the double difficulty of acquiring a *finger method* and *touch writing* at one and the same time, to say nothing of other matters of instruction.

(231.) In addition to the application of the regular finger method of this book to typewriting for the blind, one or two points deserve especial prominence, notably the division of the keyboard for the right and left hands. The keys TY, GH, VB and figure 6 mark the division of the manual, and may properly be designated as "*guides*" to the position of the hands, and hand position has a great deal to do with a command of the keyboard.

(232.) Other strategic points are A and P ; easy progressions are O, L, E, S. It will be noted (par. 19) that the *guides* and the next key to them are fingered the same, namely, 1 or **1**. Occasionally the adjacent letter is fingered 2 or **2** when CONSECUTIVE to the *guide*—for the better furtherance of the legato movement desirable in touch writing. In striking intervals the long and strong fingers 1 and 2 stretch from one key to

another far easier than 3 and 4, so this apparent exception causes no difficulty ; in fact, it is not of frequent occurrence.

(233.) For a better tactile approach to the keys it has also been found desirable to raise the "*guide*" keys mentioned a little above the general level of the manual. This plan was originated and employed by Mr. Smith, and he reports excellent results.\* However, the lifted keys are not an indispensable requisite to proper instruction for the blind, though they assist some students greatly, and in all cases make progress quicker. The study can be pursued without these mechanical helps.

(234.) At the beginning the teacher will indicate to the pupil the proper attitude to assume before the machine, and explain its mechanical features in detail. Of primary importance are the carriage movements, feeding the paper, the significance of turning the roller forward or back, line spacing, the ribbon motion, use of the front scale, shifting to upper case, etc., etc.

(235.) The arrangement of the keyboard next merits attention, namely, the division of it for either hand, and the object of the raised keys, if such there be. At the outset the learner should have a mental picture of the manual of letters.

(236.) The hand position may be first gained by placing the little fingers upon the extreme outward keys of the row, as for example P or Q, and then dropping the other fingers upon the keys inward in natural order. The *guides*, so called, will be the keys next within this span of fingers. The latter may be then taken for points of beginning, and the attack upon the other letters be made outward from the central division of the keyboard so established. All the fingers should be employed, and the action of each hand strictly confined to its own territory.

(237.) The touch will reveal T and Y side by side on next to the top row, with four keys at each side, U I O P at the right, and R E W Q at the left. Y should be depressed by the first finger of the right hand, and the letters at the right of Y by the four fingers. T is depressed by the first finger of the left hand, and the letters at the left of it by the four fingers of the left hand.

(238.) In the next lower row G and H are depressed by the left and right index fingers respectively. At the right are J K L and the semi-colon (lower case) ; at the left, F D S A.

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\* A front scale made in relief would also afford much assistance.

(239.) The lowest row has V and B for the first fingers, with N M comma and shilling-mark at the right, and C X Z and shift-key at the left ; B enjoying the distinction of being fingered by the first finger of *either* hand, as occasion may require.

(240.) The very top row contains figures, etc., 6 being attacked by *either* index finger; with 7 8 9 and hyphen at the right, and 5 4 3 2 at the left. The figures are commonly fingered with less precision than the letters. 1 is made by lower case *el*, and 10 by *el* and capital O.

(241.) Shifting to upper case not only makes capitals, but introduces new characters, and the changes should be committed to memory. The space-bar should invariably be depressed by the right thumb, and the shift-key, marked "upper case," by the left fourth finger; although the blind, (and the seeing as well), will derive much advantage from the use of a knee shift (par. 196). The left thumb is not utilized.

(242.) The above sets forth the contents of the keyboard, and the proper fingerings, and by this time the pupil has undoubtedly some idea of the same. The relations of the characters, and the intervals of fingering require study, memorization and practice. The letters which mark the division of the manual are comparatively easy of access, (especially if raised), and those attacked by the fourth fingers are not difficult to find ; but the intermediates are struck with less accuracy by the beginner.

### EXERCISES FOR PRACTICE.

(243.) To fix the location of the middle letters, and the intervals at right and left, as well as to exercise the fingers and memory generally, practice the following :

\* **1**      1      11   11   1    12   13   14   1    12   13   14   1    1    11   11  
y y y   t t t   t y   y t   y u   y i   y o   y p   t r   t e   t w   t q   g g g   h h h

1 1 1 1 1 2 1 2 1 3 1 4 1 1 1 1 1 2  
g h h g h j h k h l h ; g f g d g s g a b b b v v v v b b v b n b m

**1 3**   **1 4**   1   1 2   1 3   1 1   1 1   1 1   1 1   1 1   1 1   1 1   1  
b,   b/   v c   v x   v z   t h   g y   b g   h v   b y   h y   y b   6 6 6   6 5   6 7   t h r

$\begin{array}{cccccccccccccccc} \textbf{1} & \textbf{1} & \textbf{4} & & \textbf{1} & \textbf{4} & & \textbf{1} & \textbf{4} & & \textbf{1} & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{4} & & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{2} & & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{3} & & \textbf{1} & \textbf{2} & & \textbf{1} & \textbf{2} & & \textbf{1} & \textbf{4} & & \textbf{1} & \textbf{4} \\ \text{gyp} & & & & \text{hyp} & & & & \text{hya} & & & & \text{thl} & & \text{gyo} & & & & \text{ho} & & & & \text{ga} & & & & \text{vs} & & & & \text{ge} & & & & \text{hl} & & & & \text{bo} & & & & \text{ve} & & & & \text{te} & & & & \text{ta} & & & & \text{ha} \end{array}$

\* Fat-face figures—RIGHT HAND. Light-face—LEFT HAND. A figure under a letter—EXCEPTIONAL FINGERING.

(244.) Memorize paragraph #1, and take note that H and N are often fingered by the second finger when occurring directly before Y.

(245.) An exercise in simple words, showing easy progressions from strategic points:

1 1 121 123 1212 12111 11 112 1123 11123 112  
 ttt tr try tree true truth. th thr three threw the  
 3 2 3

1 1 1121 1141 1141 11212 11232 1 12 121 123 1241  
 thy they that than there these. yyy ye yet yes year  
 2 2

123 12431 4 43 431 431 4341 4324 4341 43412 4 3  
 yew yeast. ppp pl ply plot plat plea play plate poll  
 2 2

443 1 12 1123 1241 12341 12442 1243 4 43 2431  
 pall. ggg gr grew gray great grape grass. aaa as easy  
 2 3 4 3

434 343 3434 3431 34312 32 321 321 341 32 4 31  
 asp was wasp wast waste. we were wet way weep wh  
 3 1 3141 313 3121121 3121 31332 3134 31 32 1  
 why what who whether when whose whop whole. hhh  
 2 2

1 143 142 141 1412 12 1241 1242 1241 133 134 1342  
 hy has had hat hate he hear head heat. how hop hope  
 2

13421 1 11 11 12 12 1 1411 141 141 1411 14112  
 hoped. bbb br by be been baby bag bat bath bathe.  
 13 13

1 12 1 21 2121 21211 212121 3121 12 12 13 14 41  
 vvv veer eve ever every everett over. 68 64 69 62 26  
 3 3 3 3 3 3 1

31  
 96.

(246.) The following words exhibit more difficult intervals, but have a beginning with some letter easy of attack. They are confined to the two middle rows of letters for the most part:

13 1342 1 3 1 32 134 131 1224 1223 1244 1123 11221  
 to toad toll told top toy. trip trill trap. this their  
 2 2

113211 1121 1122 11212 1121 11223 131 1311 1 32  
 though then them think theft thrill you your yolk  
 321 2

12231 1234 4341 4312 4134 413421 1211 1241 1223  
 yield yelp plan plum prop proper grub grab grill  
 2



1 1232 23 111 43 4 3 23 31 31 32 33 13 13 13 23 33 233  
Build Mouth Pomp 10 30 14 16 19 12 50 70 41 81 21 902  
1 2

213 233 3  
840 812 1000  
2

1 41 23 1 21 3 1243431 1121 31 124134 141113 2  
Hattree Hubbub Whiplash Thereof Tiptop Bathroom  
1

1241 41 3 12121 1 141 2 13321 1 131 3 2 21 114  
Grabbag Whenever Baggage However Boyhood Every-  
3

11211 4 3212 2334  
thing Polite Iowa.  
2

112 1241 1121 412 1112 112 3 11212111 1123 1 241  
The year. They are. Three trees. The truth. Grew great  
23 23 234 23

3 2 3 4312 123 1241 141 324 1411 142 123 141 1123 11211  
We waste tea. Gray rat. Sea bath. Had his hat. This thing.

21 11 21 12 1 4 131 134 241 321 124134 1224 13113  
Every evening. A toy top. Dear sir. Tiptop trip. Yours  
3 3 1

12131 1141 23 33 13 12 31 13211 422 112 123213  
truly. That is so. No need of going. Queen-bee. Mexico.  
1 3

(249) Practice paragraphs 27-32—Common Words. Also, the following miscellaneous words.

23 1232 4312121 1212 1132 212 2143 3212132 44341243  
Excise Ascetic Juice Uncle Inimical Legible Palatial  
2 2 1 3

12231 134 211 2321212313 1 2131 1314121 12112212  
First Foppery Deleterious Buxton Bouquet Uxbridge  
1 2 3

23 23 331243 3 132 2 413 4131 3 1231 3 132 141321  
Model Social Sublime Promptly Lovely World Tablet  
1 2 1 1

4 13 11 11414 11 13 21 2 413 212 1 12231312412  
Amount Guaranty Committee Prominent Remonstrate  
2 2 1 3 1

1 3 21132 41322 3 341 124112313 211332211 1 3 1423  
Collector Proximo San Francisco Endowment Colorado  
2 321 1 2

13 21 243 2 212412 413124 1 2112321 1231 43314  
Commercial Immediate Abstract Introduction Post-  
1 2 1 2 2

3 1241 123 412 41 2 3 1212121 143113121241  
script Village Annum Scrivener Hypochondriac.  
2 3 1 2 3 2

(250.) CHAIN SENTENCES:—Choleric children need direction. Sublime effects survive evanescent thought. Affection needs stimulus. Treat these elements sagaciously. Only your reviewer remembers. His section next the elevated division seems secure. "Going, going, gone," ejaculated Dennett, the energetic call-boy. (Also paragraph 60.)

For Words in Proximity, see paragraph 59. For Prefixes and Affixes, see paragraphs 39 and 40. Paragraphs 51 to 58 inclusive furnish a variety of words for general practice.

#### LETTER WRITING.

(251.) At the suggestion of Supt. J. J. Dow we give the following explicit directions regarding the mechanical arrangement of a letter: In addition to the hints given in paragraph 63, we would remark that particular attention should be given to a few details which no rules can cover. For instance, if the name of the place *written from* be a long word, or if there is an extended street address, the point of beginning must be calculated accordingly, so that the lines will occupy the proper space, and the separate parts of the whole address will drop in a stair-like gradation.

(252.) Write the month in letters and the date in figures; also take note of the cautions expressed in paragraphs 150 and 176.

(253.) If a letter is written from a city having postal delivery, begin at about 20 of the scale, writing street number, post-office and State on the first line, and the date upon the next, dropping half-space, and indenting the second line five spaces of the scale beyond the point of beginning. Of course some taste can be displayed by proper abbreviations.

(254.) If the name of the person *written to* be long, and the address short, it may be expedient to spread the latter by spacing between the letters; only remember to make *three* taps of the space-bar between each word when the letters are so separated. (See p. 68.)

(255.) Then again, sometimes the second line proves too long, even though condensed as much as possible; and it is necessary to drop to a third line, indenting so as to preserve the *terraced* look, if we may use the expression.

(256.) The body of the letter should be well arranged, due attention being given to mechanical and rhetorical effect. The *Dear Sir* or *Gentlemen* should drop a full space, if it is to be a full-spaced page, otherwise not; and the beginning of the first paragraph dropped in *terraced* fashion from the superscription.

(257.) After the first, all paragraphs should begin at 5. Some prefer 10, but the effect is not so good in a letter, though it may sometimes answer in a legal document.

(258.) For further and general information regarding the appearance of a type-written letter, have page 61 described.

(259.) A short subscription (*Yours truly*) should begin at about 25; but if it be *Yours respectfully*, written at length, it should begin farther at the left.

(260.) It will be observed, therefore, that considerable taste can be displayed in the structure of a letter, and due attention has to be exerted outside of the treatment of its literary features. The seeing operator can judge with the eye, but the blind have to remember; and having a knowledge of the capacity of the machine, and the limits of the page, need to exercise great vigilance to provide for everything that occurs out of the ordinary—hence the particular directions given above.

#### TO ADDRESS ENVELOPES.

(261.) Insert the envelope at the left, even with the end of the rubber cylinder, having the back, or writing surface, away from the operator, and the flap down. Roll it in so that the upper edge can scarcely be felt between the rollers; though, of course, a large envelope must be admitted further.

(262.) Begin the address at about 20—or according to its length—and proceed as in addressing a letter. Some prefer to insert at the right; in which event the writing must begin at a different point of the scale. Reference is made to the Remington machine.

(263.) If the envelope is inclined to lift from the cylinder, press the holder tightly upon it; and if the alignment is bad, follow the directions of paragraph 99.

#### TABULAR WORK.

(264.) This chapter does not recommend tabular work of a very complicated character; that is, for quick accomplishment; although in view of the remarkable work that has been done by the blind it is hardly fair to presume that anything in typewriting is beyond the ability of this unusually gifted class. As figures in columnar arrangement, and skips about the page, require constant reference to the scale, it must follow that complex work upon the machine can only be done slowly.\*

A specimen of tabular work executed by a blind person is exhibited on page 82.

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\* Supt. Dow speaks of having filed a nick in the front scale at the middle point, and we have elsewhere suggested a raised scale.

(265.) In conclusion it seems fitting to pay a tribute to the skill displayed in typewriting by a class so heavily handicapped. The blind have accomplished wonders, and with better facilities within reach they will do still more. Mr. Smith says: "Take two persons of equal ability, one sighted and the other blind, and I will guarantee the latter will surpass the other in attaining facility in the use of the machine within a given time." And speaking from the other point of view we would remark that no person in the full possession of his powers will think of begrudging the opportunity for bread-winning held out by the typewriter, when the world is wide for the seeing, but those who work in darkness have but a narrow field of labor.

## PRACTICAL TYPEWRITING.

Number of Teachers employed, with Teachers' Wages,  
from 1879 to 1888.

| Teachers. |       |         | Wages per month. |         |
|-----------|-------|---------|------------------|---------|
| Years.    | Male. | Female. | Male.            | Female. |
| 1879,     | 1,133 | 7,462   | \$67.54          | \$30.50 |
| 1880,     | 1,134 | 7,727   | 85.54            | 38.49   |
| 1881,     | 1,079 | 7,858   | 102.90           | 32.32   |
| 1882,     | 1,038 | 8,197   | 103.33           | 41.90   |
| 1883,     | 1,058 | 8,340   | 103.02           | 44.18   |
| 1884,     | 1,061 | 8,460   | 120.72           | 43.85   |
| 1885,     | 1,060 | 8,610   | 111.23           | 43.97   |
| 1886,     | 1,033 | 8,696   | 116.85           | 44.93   |
| 1887,     | 1,010 | 8,887   | 119.34           | 44.88   |
| 1888,     | 901   | 9,222   | 108.88           | 45.93   |

## Normal Teachers.

| Attended<br>Normal Schools. |           |     | Graduates. |     |
|-----------------------------|-----------|-----|------------|-----|
| Years.                      | Increase. |     | Increase.  |     |
| 1879,                       | 2,228     | --- | 1,911      | --- |
| 1880,                       | 2,236     | 8   | 1,831      | 20  |
| 1881,                       | 2,416     | 180 | 2,037      | 106 |
| 1882,                       | 2,581     | 165 | 2,155      | 166 |
| 1883,                       | 2,744     | 163 | 2,240      | 85  |
| 1884,                       | 2,866     | 122 | 2,392      | 152 |
| 1885,                       | 3,003     | 137 | 2,420      | 28  |
| 1886,                       | 3,134     | 131 | 2,533      | 113 |
| 1887,                       | 3,246     | 112 | 2,677      | 144 |
| 1888,                       | 3,373     | 127 | 2,689      | 12  |

The above was prepared by a pupil of the Perkins Institution, Boston,---a young man totally blind, who had operated the typewriter less than a year.

## PREFACE TO THE MACHINE EXHIBITS.

(266.) The writing machines discussed in this volume are all standard productions. They represent the highest inventive skill and the best workmanship. Each is capable of swift action and fine work ; every one has its admirers—all are good.

(267.) The similarity of keyboards, and the ready adaptability of the finger method of Practical Typewriting to them all, has been the incentive to give to this issue what may be termed universal features.

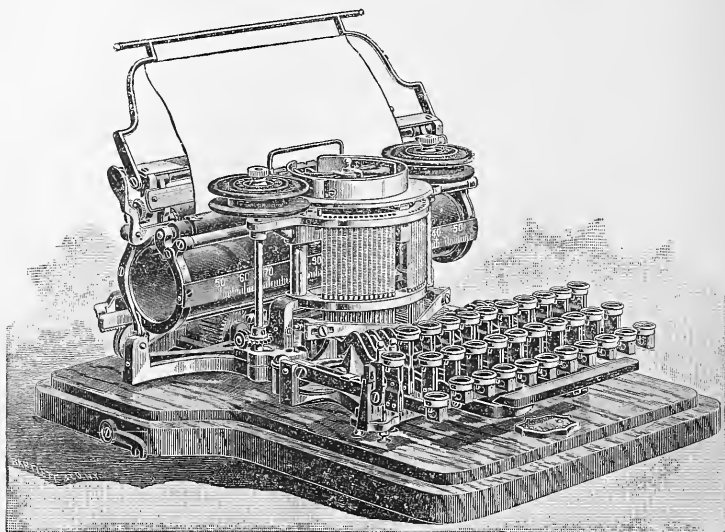
(268.) But these exhibits do not supply the place of the customary book of directions, being only intended to supplement the same by fuller explanation and application of such points as deserve more than a passing notice. Moreover, these chapters were prepared with the assistance of the makers of the machines, and great care has been exercised to make them helpful to the enquirer.

(269.) Teachers will find interesting features for instruction all through the book. For instance, very primary advice and finger exercises can be found in the chapter for the blind ; extended word practice in the Remington exhibit ; a legal form with detailed fingering in the Hammond ; some names of cities in the Yost ; sentences and letters in the Smith Premier, and general illustrative examples among the fac-simile ; the Bar-Lock gives commendable general and particular instruction, and exhibits a fine picture of the Spanish caravel "Santa Maria," executed entirely on their machine ; the Caligraph, some special finger work and long words readily written, besides sentences and letters.

## THE HAMMOND.

## FINGER METHOD.

(270.) The Hammond typewriter referred to principally in the following pages is, the new pattern having the "Universal" keyboard, so called, an arrangement of letters which brings it entirely within the scope of this method. Although the original Hammond, termed the "Ideal," has an excellent keyboard, and one susceptible of an



THE HAMMOND MACHINE.

all-finger treatment, it is perhaps unfortunate that this scheme of fingering does not strictly apply, and, therefore, the within instruction is limited to the more recent version of the machine. Apart from the keyboards the machines are almost identical as regards mechanical features; and as the following a keyboard receives is sometimes a matter of personal preference, we submit what we do without praise or disparagement of either arrangement, having the sole aim to assist the enquirer to reach practical results according to the best advice we have to offer.

(271.) The "Universal" keyboard in its essential features so resembles that of the diagram on page 5 that the same cut can be used for illustrative purposes. [See also diagram below.]

(272.) The letters TY, GH, VB mark the division of the keyboard into right and left hand territory, and the same rules of fingering apply as are set forth in paragraph 19, and illustrated by the finger exercises on pages 6 to 27 inclusive.\*

(273.) The space-bar is depressed by the right thumb, although we can see no objection to its being tapped by the left if occasion requires.

(274.) The depression by a finger of the shift-keys tends to disturb a consistent finger method, but less difficulty in this regard comes with the Hammond, because

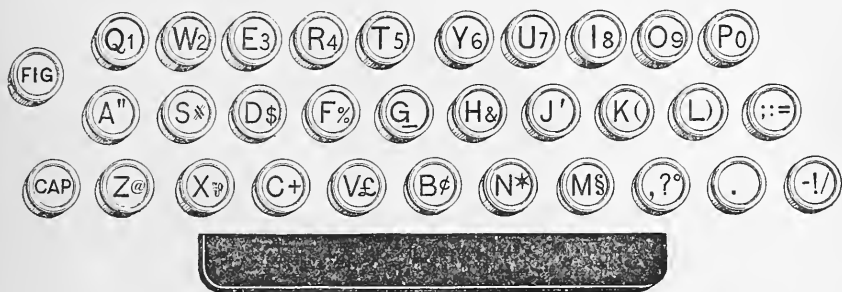


DIAGRAM OF KEYBOARD.

of the easy action of the shifts. When the left fourth finger is upon the shift the letters in the left division of the manual are attacked as follows:  $\begin{smallmatrix} 3 & 3 & 2 & 2 & 1 & 1 & 1 \\ Q & A & Z & W & S & X & E \end{smallmatrix}$ ,  $\begin{smallmatrix} 1 & 1 & 1 \\ D & C & R \end{smallmatrix}$ ,  $\begin{smallmatrix} 1 & 1 & 1 \\ F & V & N \end{smallmatrix}$ , without removing the little finger from its position. Other capitals are attacked by the right hand. [See also paragraph 26.]

(275.) The very beginner can find excellent primary practice in the word exercises for the blind, paragraphs 243 to 246 inclusive.

(276.) Although it is well understood that the strictness of rules of fingering is relaxed somewhat when words are combined into sentences, yet the deviations from

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\* Attention is directed to the exceptional fingering of N and H when occurring before Y, the second finger being used.

exact procedure are not frequent. This can best be shown by the following selection made at random :—

3 1 4 1 3 3 1 2 4 3 2 1 2 3 2 1 3  
State of Massachusetts,

2 3 2 1 1 1 3 1 3 2 1 3 2  
County of Suffolk.

3  
ss.

1 3 2 1 1 2 2 2 2 1 3 2 3 2 1 1 4 1 3 1 1 2 3 3 1 1 2 4 1 3 1  
BE IT REMEMBERED, that on this 10th day of

4 2 2 3 4 2 3 2 3 1 3 1 3 2 3 1 1 3 2 1 2 1 3 2 1 3 2 4 2 3 1 4 2 1  
April, A.D., 1890, before the undersigned, a notary

4 2 1 3 2 2 3 2 1 1 2 1 4 2 2 1 3 2 1 1 3 2 3 2 1 1 1 3 1 3 1 1 3 2 4 1 3 2 3 3 4 2 2  
public, within and for the County of Suffolk aforesaid,

4 2 1 3 3 1 4 3 1 2 4 2 2 2 3 4 2 4 1 3 2 1 3 4 1 3 2 3 1 3 2 3 4 2 1 3 3 1 4 3 1  
personally came Isaiah Sweetwater, who is personally

2 1 3 3 1 1 3 1 3 1 3 1 3 1 1 3 3 4 2 3 4 2 1 3 3 1 3 1 3 3 2 1 4 2 2 2 3  
known to me to be the same person whose name is

3 2 1 3 2 1 2 1 3 2 1 3 1 1 3 1 3 2 3 1 3 2 1 1 2 1 3 1 2 1 3 1 1 3 1 3 2 2 1 2 1 1  
subscribed to the foregoing instrument of writing,

4 3 1 1 3 1 3 2 1 3 2 1 1 3 2 3 2 1 4 1 2 4 1 2 1 3 3 3 2 1 1 2 1 1 2 3 4 2 3 1 3  
as the obligor therein, and acknowledged the same to

1 3 1 2 3 1 2 3 4 2 1 4 2 2 2 3 1 3 2 1 1 3 4 1 1 4 3 3 2 1 1 3 2 3 2 1  
be his free act and deed for the purpose therein

2 3 1 1 2 3 1 3 2  
mentioned.

2 1 1 2 3 1 2 1 3 2 1 3 1 3 2 3 3 1 2 1 4 1 3 1 3 2 3 2 1 1 3 3 2 1 2 1  
IN TESTIMONY WHEREOF I have hereunto set my

1 4 2 2 4 1 2 4 1 2 3 2 1 2 1 3 1 2 2 4 3 3 2 4 3 4 1 2 1 3 1 2 3 2 2 1  
hand and affixed my official seal, at my office in

1 3 3 1 3 1 1 1 3 2 4 1 4 1 2 1 3 4 2 1 2 2 3 1 4 1 3 1 2 3 2 2 1 3 1  
Boston, the day and year first above written.

(277.) From the above it will be seen that only *one* variation from regular fingering had to be made, namely, in passing from the words “my” to “hand.” Here a jump, rather than a gliding movement, occurs; but the proportion of such irregularities is commonly so small that words may generally be regarded as the syllables of a great sentence, wherein the passage from one to another is hardly broken—even by the thumb action upon the space-bar, which after a time becomes entirely mechanical.

## HAMMOND HINTS.

(278.) As the impression hammer is impelled by a spring, and as the key-levers merely operate to release this spring, so that it can exert force of impact, it will be understood that no greater force need be used to depress a key than is required to bring the type-wheel to the printing position, and to release the said spring. If the touch of the lever machines can be compared to that of a piano, that of the Hammond more nearly resembles *organ* action, being legato rather than staccato.

(279.) The keys operate to oscillate the type-wheel, so as to bring such character as may be wanted opposite the hammer ; therefore it is essential that the keys be entirely depressed, otherwise the types will fall short of their printing position.

(280.) Although, in order to produce perfect impressions, it is necessary to fully depress each one of the keys, it should not be presumed, on account of operation in this manner, that speedy manipulation cannot be accomplished. The proper touch is to place the finger upon the key and press it downward firmly until there is a slight resistance. In slow procedure this may be described as a blow and a pause, but after the "knack" of it is acquired the separate steps are not noticeable. This does not necessitate slow operation, but the keys may be depressed as fast as desired ; in fact, no operator has been found capable of overtaking the machine.

(281.) The figure-shift key should be noted. This is operated by the left fourth finger, and serves to introduce many new characters.

(282.) The shifts are easily operated by the little finger, as they do not move a heavy carriage—only lift an exceedingly light type-wheel controlled by an elastic spring ; on account of which, weak fourth fingers will not be inconvenienced.

(283.) Very fine tabular work can be executed upon the Hammond, and it can be done with great facility. The writing comes in view after the first line has been printed, and processions of figures are easily kept in alignment for this reason—one rank being written according to the one above, rather than by reference to the scale.

(284.) The scale is read as follows : On old Ideal machines, from the white mark cut in the forward end of either side of the key-shield ; and on late Ideals and Universals, from the metal indicator on either side of the machine underneath the ribbon spools. The numbers up to 50 appear on the right side of the machine, and those above 50 on the left side. It is not necessary to use the scale for making corrections or for placing words or figures underneath others written one or two lines above ; the notch in the ribbon

shield and the line guides can be used with more convenience and accuracy. The operator learns that, by placing the paper in the extreme left side of the carriage, providing always for the same left margin, the impressions made during the step by step movement of the carriage are indicated on the scale from one upward. Paragraphing can be uniformly done the same as with all other writing machines; likewise the placing of words or sentences in the center of sheets for headings, etc., is done under rules (§ 89) familiar to all operators. Much inconvenience and time can be saved, when it is desired to place a word or sentence in the center of a sheet, by writing the same on a strip of paper and placing the strip with the hands in the middle of the sheet inserted in the machine, on which the phrase is to be written. After the word or sentence thus written upon the strip has been placed in a central position on the paper, the carriage should be moved to the left or right until the first letter of the word or sentence appears immediately above the notch in the ribbon shield. The strip can then be removed, the paper to be written upon lowered to the proper position, and the sentence written. This will save making a calculation for determining the center of a word or sentence, and will frequently prevent errors.

(285.) Always insert two sheets of paper [according to the book of directions] one, preferably a thick sheet, serving for backing. Two sheets are not absolutely necessary, but work written where two sheets are inserted in the machine will be found to appear more attractive.

(286.) Very little oil is necessary on any part of the machine. A little around the pins by which the type-wheel is driven, and a drop on the escapement mechanism occasionally may be required. The type-wheel should every few days be removed, and the steel bushings thoroughly cleaned; after which they should be lubricated by being rubbed with an oily rag. None but the very best watch or clock oil should be used. In oiling the parts of the machine it is not advisable to use an oil can; a small camel's-hair brush, or small wire dipped in the oil, will lubricate the parts amply.

(287.) The hammer and carriage springs bear a close relation one to the other, and when the blow of the hammer is increased for any reason the carriage motion should be tested to see if it is affected by the change. It generally is, and its tension should be increased or decreased accordingly.

(288.) A shift-key and letter can be depressed simultaneously; or the fourth finger can be allowed to rest on the shift, and the letters of the left-hand division of the manual may be attacked by the first, second and third fingers of that hand. Of course right-hand letters are operated by the right hand always.

(289.) The rubber strip stretched from one carriage end to the other should be first attached by the outer hole in the right end, and then as it sags attach by the inner one. If the lower parts of the characters print faintly it is evidence that the impression strip is not stretched enough. Should it adhere to the paper, dust with chalk.

(290.) Four variations in line spacing are controlled by the milled nut at the left, called the line-feed regulator. Be sure and turn it entirely round at each change, which is proved by engaging the notch in the nut with the pin beneath at the end of each turn.

(291.) Keep the ribbon-shield clean, and remove when making a stencil for reproduction work. For tabular work the notch in the shield dispenses in a great measure with use of a scale.

(292.) Upon insertion of the paper, drop same entirely to the bottom of the cylinder, and it will be found to be held straight for an even beginning. A long or very wide sheet should be partly rolled before insertion.

(293.) The printing may be examined by turning the feed-roll knob toward the writer, and if the spacing is the widest, the printed line will show below the ribbon. The better way, however, is to push back the paper with the finger just in front of the impression strip.

(294.) Omitted letters may be inserted after placing the blank space underneath the notch in the ribbon shield and the line in which the letter is to appear even with the line guides on either side of the shield. The last letter printed can be easily seen by pressing the paper forward with the finger below the erasing plate. If the paper has been fed up more or less before the discovery of an error or omission, it should be fed down by turning the feed roll, first lifting the feed pawl handle on the left side and rear of carriage. If then, on releasing the pawl handle and giving the final and downward pressure to the same, or turning the feed roll knob forward in order to insure the full engagement of the feed pawl in the teeth of the ratchet wheel, the paper is thereby slightly shifted so that the lower edge of the line of writing is either a little below or a little above the line guide, it can be brought to the desired position—if two sheets have been inserted as recommended—in the following manner: If the lower edge of the line of writing is below the line guide, turn the front roll by hand so as to move the paper up until the proper alignment is secured. If it is above, lift the pawl handle again and turn the feed roll so as to bring the lower edge of the line of writing a little below the line guide. The pawl handle should then be released and depressed, and if the lower edge of the line of writing is still below the line guide, the paper should be raised by

slightly turning the front roll, as before described. The carriage may now be moved to the proper place and the letter inserted. If the printed paper has been removed from the machine and is to be re-inserted to continue the writing or make a correction, it should be placed in the carriage in the usual way, but before the letters are printed it should be seen that one of the letters of a word already written appears centrally over the notch in the ribbon shield. The rolls should then be closed, and the paper fed up or down and adjusted by the line guide, as may be required to bring it into proper alignment. If manifolding is being done on the machine, and the paper is to be turned down to make a correction, the front roll should not be disturbed; the adjustment to the line guide being effected in this case by pulling the paper by hand the necessary distance upward through the unseparated rolls.

(295.) Manifold copies may be taken as follows: Prepare the paper in the usual way, by laying down a sheet of manifold paper and then a sheet of carbon paper upon it with the carbon surface downward, and continue until the necessary number of sheets have been arranged. Insert the paper in the machine, together with a sheet of ordinarily hard paper (that used for wrapping purposes being preferable) behind the paper prepared for manifolding, and proceed with the work. Operators who do not desire to use a thick sheet of paper in the carriage with the paper to be written upon, can accomplish the same result by placing a thick strip of paper, or a sheet of thin paper folded several times, in front of the impression strip, allowing it to rest on the rolls and not in the grip of same. When the paper inserted in the carriage is lifted line by line, the strip of paper will not be lifted, but will remain in the position where placed. As there are various kinds of carbon in the market, *and as carbon manufactured for type-bar machines seldom gives good results on the Hammond*, it is necessary to obtain carbon adapted to this machine; and if Hammond carbon cannot be obtained from the dealer of whom they purchase their typewriter supplies, application should be made to the company or its agents. If tissue copies are wanted, the double carbon paper should be used, and alternating with each of the tissue sheets, so that an impression may be made on both sides of the tissue sheets. The hammer spring thumb-nut at the right of the hammer (from the rear) should be used to give a stronger blow when it is required. Should the carriage move sluggishly, if the tension of the hammer spring has been increased, it will be necessary to increase the tension of the main spring.

(296.) Some operators seem to be under the impression that carbon copies can be taken upon any grade of paper and on any thickness. The best manifold results are usually obtained upon soft paper, and *wove* paper is preferable to *laid*. When a number of copies are required, very thin paper should be used, and the smoother the surface the better the result will be. Some operators also think that the original can be written

upon thick paper, and that carbon copies can be made on thinner sheets of paper placed back of the same with equally as good results as though all of the sheets were thin. This is an erroneous idea, as will be readily understood when it is noted that by using a thick sheet of paper for the original the outlines of the letters are made heavier in proportion to the thickness of the paper, and necessarily the carbon copies will not be nearly so sharp as if the first sheet were a thin one.

(297.) To prepare a stencil for the Mimeograph or other duplicating device that employs paraffine paper: Exceptionally beautiful results by these processes can be obtained if the operator will carefully follow the directions as follows,—Remove the ink ribbon (or slip to the front of the type-wheel guard), rubber impression strip, and ribbon shield from the typewriter. Put the stencil sheet into the typewriter with the *perforating silk only* back of it, without the paper “backing.” Use the hammer at its greatest tension, and in doing this it may be necessary to give the main spring one more turn, as in manifolding. Clean the type-wheel before commencing to write. Parties having machines numbered below 6,000 should have them fitted with large main and hammer springs. All machines above that number contain the necessary appliances for executing stencil work. It is important, however, for all parties desiring to execute perfect stencil work to use the Mimeograph wheels, which can be obtained from the Hammond Company, or its agents, for the usual price of the ordinary wheels. Such wheels should be used for stencil work exclusively, as those for ordinary writing seldom produce a perfect stencil. It is also advisable to use paraffine paper which is *known to be adapted to* the Hammond machine.

(298.) When using paper that is very wide, say double the width of the carriage, roll before insertion, and if it is tabular work, make the columns of figures at the left; then roll again, and insert in the carriage so that the right of the paper can be printed, and proceed as before, being very careful to adjust so that the continuation of the lines shall be uniform with the first portion written.

(299.) When the capital-shift is depressed, and perhaps fixed by the catch, the figure-shift may be depressed in addition without releasing the other shift.

(300.) Observe that the period of the Universal machine adapts itself to either the shifts or the normal condition of the manual; also note the variety of characters for mathematical work and the reference marks.

(301.) Erasures may be made upon the nicked surface just back of the paper, moving the line of writing to that point. When restoring to printing position be careful to follow the line-guide.

## GENERAL FORM OF AGREEMENT.

THIS AGREEMENT, made the first day of August, 1890, between Isaac E. Hill, of Tarkio, County of Atchison, State of Missouri, of the first part, and John Smith, of Fairfax, Mo., of the second part:

WITNESSETH, that the said Isaac E. Hill, in consideration of the agreement on the part of the second part, hereinafter contained, contracts and agrees to and with the said John Smith, that he will deliver, in good and marketable condition, at the village of Corn-ing, Mo., during the month of September, of this year, one hundred tons of prairie hay, in the following lots, and on the following specified terms; namely, twenty-five tons by the 7th of September, twenty-five tons additional by the 14th of the month, twenty-five tons more by the 21st, and the entire one hundred tons to be all delivered by the 30th of September.

The said John Smith, in consideration of the prompt fulfilment of this contract, on the part of the party of the first part, contracts to and agrees with the said Isaac E. Hill, to pay for said hay Six Dollars per ton, for each ton as soon as delivered.

In case of failure by either of the parties hereto, it is hereby stipulated and agreed that the party so failing shall pay to the other One Hundred Dollars as fixed and settled damages.

In witness whereof, we have hereto set our hands, the day and year first above written.

ISAAC E. HILL,

JOHN SMITH,

## SPECIMEN OF COURT TESTIMONY.

Mr. Lovely, Q.---Dr. Andrews, what is your profession? A.---Physician and surgeon.

Q.---Of how many years practice? (A.---Will be fourteen next February.

Q.---Where did you graduate, Doctor? A.---At Rush Medical College, Chicago.

Q.---What preparation did you make for the profession besides your attendance at college? A.---Well, after graduating at Rush I practiced two or three years and went to New York and took a full course in Bellevue Hospital Medical College, and graduated there again; and after practicing a few years more--two years more--I went off to Chicago again and was there three months, in the different hospitals and taking private courses, not in any particular college.

Q.---Well, Doctor, you have been to Europe? A.---Yes; I practiced then again three or four years, and went to Europe and took a course of medicine in Berlin and Vienna.

Q.---Attended the lectures and clinical courses there in the hospitals? A.---Yes; my course there was entirely clinical. I did not enter the colleges at all, but took private clinical courses.

Q.---State whether or not you have seen Mr. Harrold; the plaintiff in this case? A.---Yes; I first saw him this morning.

STATE OF OHIO,                   :  
          CUYAHOGA COUNTY.       : ss.

EDWARD PLACE  
vs.  
ROBERT GRIMES.

IN THE COURT OF COMMON PLEAS OF CLEVELAND,  
OF NOVEMBER TERM, A. D., 1882.  
No. 282.

GEORGE PHILLIPS, OF CLEVELAND, IN SAID COUNTY, THE LAWYER AND ATTORNEY OF EDWARD PLACE, OF SAID CITY, COUNTY AND STATE, BUTCHER, ON OATH DECLARES THAT THE SAID EDWARD PLACE HAS A DEMAND AGAINST THE WITHIN NAMED ROBERT GRIMES, UPON THE CAUSE OF ACTION STATED IN THE WITHIN WRIT, WHICH THIS DEPONENT BELIEVES TO BE JUSTLY DUE, AND UPON WHICH HE EXPECTS THAT THE SAID EDWARD PLACE WILL RECOVER TWELVE DOLLARS AND FIFTY-THREE CENTS, OR UPWARDS; AND THAT THIS DEPONENT HAS REASONABLE CAUSE TO BELIEVE THAT THE SAID ROBERT GRIMES IS ABOUT TO DEPART BEYOND THE JURISDICTION OF THE COURT TO WHICH SAID WRIT IS RETURNABLE, THAT IS TO SAY, INTO THE PROVINCE OF ONTARIO, CANADA, AND NOT TO RETURN TILL AFTER JUDGMENT MAY PROBABLY BE RECOVERED IN SAID SUIT, SO THAT HE CANNOT BE ARRESTED ON THE FIRST EXECUTION [IF ANY] WHICH MAY BE ISSUED IN SAID SUIT.

GEORGE PHILLIPS.

SUBSCRIBED AND SWORN TO THIS TWENTY-THIRD DAY OF NOVEMBER, A. D., 1882, BEFORE ME,

QUARTUS K. RICE,

NOTARY PUBLIC.

Palace Hotel, San Francisco,

Feb. 8th, 1890.

MESSRS. RICHARDS &amp; DE JONES,

New York City.

Gentlemen:-

I arrived in San Francisco yesterday, after a somewhat disagreeable trip, the roads having been much obstructed by landslides, and bridges carried away by the swollen streams. I have called upon some of the trade, and judging from the low stocks of goods on hand, I shall take some large orders. There is a better feeling among the leading houses than I expected. I called upon Messrs. J. M. H. & Sons, as instructed by you, but was not favorably impressed with them, their store and stock having a very slack appearance, and showing a loose way of doing business. I could not learn of their doing the amount of business represented, nor could I obtain satisfactory information as to their standing. I should hesitate about filling their orders without a guarantee. Our new goods are appreciated, and orders exceeding my anticipations have already been taken.

Will leave for Chicago on the 9th inst., and in the meantime shall keep you informed of what is done here.

Very respectfully yours.

A handwritten signature in cursive script, reading "H. M. Smith". The signature is written in dark ink and is positioned at the bottom right of the letter, below the typed closing "Very respectfully yours."

547 Fifth Ave., Albany, N. Y.,

January 3, 1873.

Messrs. A. T. Stewart & Co.,  
New York City.

Gentlemen:

Enclosed find Post Office Order for Twenty-five Dollars  
[\$25.00] for which, please send by American Express, the following  
goods:

|                                                        |                |
|--------------------------------------------------------|----------------|
| 2 Lancaster Table Spreads, [\$5.50], . . . . .         | \$7.00         |
| 4 Prs. Alexandre Kid Gloves, [\$2.50] No.6½,           |                |
| Brown, Green, Yellow, Black, . . . . .                 | 10.00          |
| 8 Yds. Calico, Brown, with small figure, [25¢]         | 2.00           |
| 12 "        "        White, "        "        pink dot |                |
| figure, [25¢], . . . . .                               | 3.00           |
| 2 Linen Handkerchiefs, [50¢], . . . . .                | 1.00           |
| 4 Prs. Lady's Cotton Hose, [50¢], No.9, . . .          | 2.00           |
|                                                        | <u>\$25.00</u> |

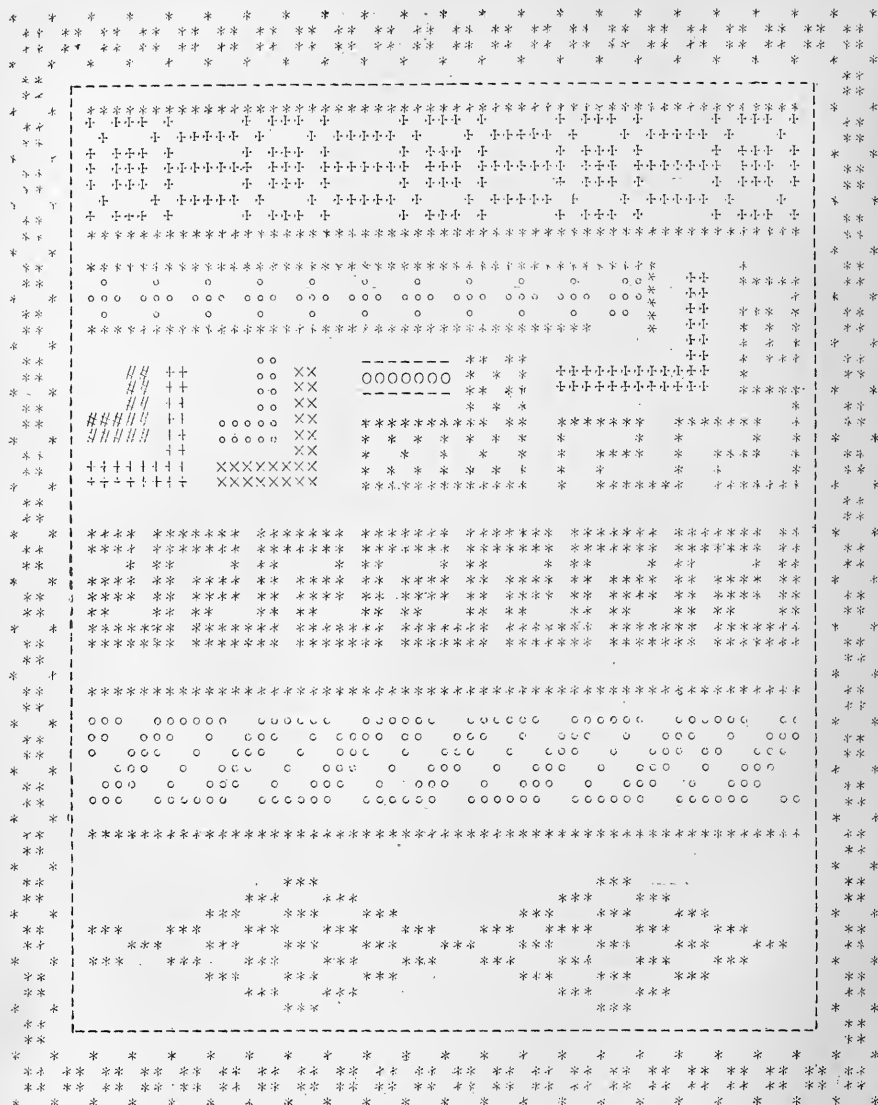
Your earliest attention will greatly oblige,

Yours truly,

MRS. JAMES. H. BROWN.

## FLUCTUATIONS IN PRICES OF MINING STOCKS AT BALTIMORE IN 1889.

| NAME OF COMPANY.   | Par<br>value | Opening. |        | Highest and lowest<br>during the year. |        |        |        | Closing. |        |
|--------------------|--------------|----------|--------|----------------------------------------|--------|--------|--------|----------|--------|
|                    |              |          |        | Bid.                                   |        | Asked. |        |          |        |
|                    |              | Bid.     | Asked. | H.                                     | L.     | H.     | L.     | Bid.     | Asked. |
| Atlantic Coal:     | 10.          | \$1.25   | \$1.50 | \$1.40                                 | \$1.00 | \$1.80 | \$1.40 | \$1.00   | ....   |
| Balt. & N'th Caro. | 5.           | .24      | .30    | .30                                    | .05    | .35    | .15    | .05      | .10    |
| Big Vein Coal.     | ...          | ....     | 1.05   | 1.45                                   | 1.10   | 2.00   | 1.25   | ....     | 1.50   |
| Conrad Hill.       | 5.           | ....     | .15    | .17                                    | .05    | .27    | .10    | ....     | 1.50   |
| Consolidated Coal. | ...          | ....     | ....   | .28                                    | .22    | .29    | .26    | .22      | .27    |
| Diamond Tunnel.    | 10.          | .37      | .45    | .47                                    | .30    | .50    | .25    | .35      | .45    |
| Lake Chrome.       | 5.           | .05      | .10    | .10                                    | .05    | .20    | .05    | .08      | .12    |
| N. State Balto.    | 5.           | .20      | ....   | .20                                    | .15    | .35    | .22    | ....     | .22    |
| Ore Knob.          | ...          | .07      | ....   | .08                                    | .05    | .12    | .10    | ....     | .12    |
| Silver Valley.     | 5.           | .50      | .90    | .90                                    | .30    | 1.00   | .45    | .35      | ....   |



## YOST.

## FINGER METHOD.

(302.) In applying the finger method of this book to the Yost Writing Machine the first feature of interest is the double key board, the capital letters being produced by another manual identical in its order with the lower case, but lifted above the latter three rows higher.



THE YOST MACHINE.

fingering, but only calls for a double application of the method.

(303.) The repetition of the letters is indicated by a change in the color of the keys. Seventy eight characters can be written, and the keyboard is very compact ( $6\frac{1}{2} \times 9$  inches), considering its range. This latter feature is a help in its manipulation, and assists touch writing somewhat. The duplication of the letters does not, however, occasion complicated

(304.) For purposes of instruction the keyboard may be supposed to be divided vertically into territory for either hand, as partially illustrated in the diagram of page 10, and the keys marking this imaginary division may be called "guides," as in paragraph 352. In the top bank of either manual TY are the guides; the middle bank GH; the lower, VB. These keys are attacked by the index fingers, and the remaining letters are operated by the four fingers as described in the said diagram.

(305.) Particular attention should be given to the duty of the little fingers. It will be noted that the accompanying diagram sets forth the "Universal" keyboard. Essentially, Fig. 1. is a distinct character, and the letter l will not need to be utilized. In other important respects the keyboard is uniform with those of the other machines treated in this work.

(306.) The touch of the Yost should be quick and sharp, though not necessarily hard. A light staccato blow is preferable. When properly attacked the type acquires a momentum which finishes the stroke, and gives a good and sufficiently clear impression. If the finger action is exerted as above, no collisions will occur, and very fast writing can be performed.

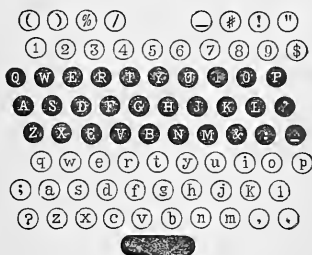


DIAGRAM OF KEYBOARD



(313.) \* When words are builded into sentences there will be occasional lapses from the strictness of fingering (41), but only to escape the "hoppity-skippity" style of manipulation, which latter we earnestly recommend the beginner to avoid. If the jumps common to the one or two-finger fashion of writing are taken, a "cast-iron" system of fingering might obtain; but more graceful writing follows a gliding, legato action, and we are confident this style will give more enduring satisfaction.

#### GENERAL INFORMATION.

(314.) Briefly stated, the features of the Yost Writing Machine are inflexible alignment, detachable types and carriage, single scale, double manual, direct printing, novel inking arrangement, portability and general simplicity.

(315.) First, remember to always keep the machine clean, inside as well as out. Never let erasings drop into the basket. When an erasure is necessary slide the carriage either to the left or right, as the case may require, so the erasings will fall outside of the basket.

(316.) The Yost differs materially in its inking apparatus from the other standard typewriters. The types, printing direct, are capable of producing the finest outlines, and no operator should be satisfied with less than this. A hard, soft or medium platen is furnished, according as many, few or no manifolds are desired. Most operators prefer the medium hard platen, so that they can manifold if desirable; but it should be noted that there is less "give" when the type strikes against a hard surface, and, therefore, the imprint is likely to be less distinct than when a soft printing bed is employed. The backing-sheet is appropriate for the Yost, and with the hard platen it is always necessary to insert two sheets of medium weight paper at a time, or say, three sheets of thin. If this is done the complaint cannot be made that the types "are not on their feet." The backing sheet also serves to preserve the platen.

(317.) If the type does not ink, it will not print; therefore it is imperative that the character returns to the pad freely at every stroke. If through friction a difficulty arises, clean the point of friction; and if the double link of a type-bar becomes pressed together, relieve it by gently forcing apart with a screwdriver, making all the joints work freely and easily.

---

\*The rarity of such deviations is illustrated by paragraph 276, pages 85-86.

(318.) The print should be uniformly clear and distinct ; if it is not, something is the matter : either the operator taps the keys in a tardy, “weak-kneed” fashion, or the ink-pad does not deliver freely.

(319.) If the pad seems dry in any spot, take out the case containing it, scrape the surface with a knife blade, and squeeze it down a little to start the flow.

(320.) Experience has shown that an ink-pad works better after it has been used a month or two ; because then, if the surface has not been disturbed, the types imbed themselves slightly, and extract ink over their whole surface every time.

(321.) When changing pads, to introduce a different kind or color of ink, the careful operator will, before putting on the new pad, wipe off the surface of the types, which can be quickly done by forcing type through center guide, and rubbing with a brush.

(322.) Ink pad in one piece. *To Insert.*—Lay the keyplate on the keyboard, with bent edge down over the upper row of keys, to keep it from slipping. Press evenly on the plate to bunch the keys in the centre. Spring the ends of the pad case apart ; start one end under the front scale and around under the guide holder at the back until it comes out from under the scale on the opposite side ; then, with the two ends together, return the junction of the case until it is under the guide holder and opposite the wide space between the type-bars. Snap into the rim on the clamp ring.

(323.) The inking and printing system of the Yost gives better results upon qualities of paper which have not a hard, glazed surface. It should be understood that papers suited to one form of writing machine may not be best for another. The peculiar hard properties of the fine linen and bond papers seems to confine the tendency to spread of the coloring pigment of the ribbon machines. The kinds of paper last mentioned are, on the other hand, illy adapted for *direct* printing. What is required for the Yost is a paper of smooth finish, and a somewhat softer texture ; ordinary book paper exhibits the work beautifully. The operator desiring to reach the best results will do well to select his paper with the above in mind.

(324.) Do not make hard work of feeding the paper to the carriage. Let it rest squarely by its own weight between the rollers at the back, then turn it in by using the large finger wheel at the left.

(325.) When feeding narrow paper apply the envelope or postal card guide at the right of the front carriage wheel, so that its left side shall rest under the left paper guide.

(326.) The bell may be silenced by setting at "O" of the scale. It is regulated by the small thumb-screw at the left.

(327.) Use the finest oil for lubrication of this or any typewriter. The only points where oil will be needed upon the Yost are the back rail (wiping carefully after application), the front rail, the rack-teeth (applying with the finger), also possibly the key-stems where they pass through the bridges and base, should there appear to be friction there.

(328.) The types should not be cleaned with oil, and none should be applied about the center guide at any time. When cleaning, hold the type in the guide by depressing the key, and wipe with a dry brush ; or, if benzine is used, let it evaporate before returning type to pad.

(329.) If the carriage moves tardily it is more likely because the back rail needs cleaning than because more tension is required. The carriage tension screw should be used very sparingly ; two or three clicks should be enough to make a material effect one way or the other.

(330.) The carriage can at any time be pulled to the right. To slide it to the left a few letter spaces, operate the space key. To run it quickly any distance to the left (*i.e.*, toward the end of the line), press the release key at the left of the carriage, which will release the dogs.

(331.) It is wiser to correct errors and supply omissions before removal of the paper from the machine. The habit of running the eye over the work as each page is completed, and before taking out the sheet, is a good one to cultivate.

(332.) A superior imprint may be secured by inserting, say, four sheets of rather thin paper at once ; this gives the impression a velvety look very agreeable to the eye.

(333.) When directing envelopes the envelope clip will be found convenient. With the slot down, clamp this over the front carriage rod at the proper place to give you the desired margin at the left of the envelope or paper.

(334.) An advantage of the double manual greatly to be enjoyed is the facility of making addresses, titles, emphatic words, telegrams, etc., all capitals. When doing tabulated work labor is saved by taking a strip of paper as long and wide as the scale and inserting in place of scale.

(335.) Upon this strip mark the points at which the various headings will come, and the carriage need not be raised so often.

(336.) Use the front scale only for adjusting margins ; never for locating your place on the paper. Raise the carriage and set it by the pointer.

(337.) Be sure and get all the advantages possible out of the pointer. It plays an important part in the event of supplying omissions, making corrections and maintaining the columnar arrangement of figure work. If it perchance mars the printing, bend a little so it will travel across the page a bit below the writing.

(338.) For Mimeograph work do not remove the pad, and do not apply vaseline, or other substances to the face of the type ; the ink itself does all the needful lubricating.

(339.) Operators who have widely varying kinds of work will find it convenient to have at hand a selection of special type, such as French, German and Spanish accents, fractions, diphthongs, geometric signs and reference marks. These can be substituted for characters seldom used without much difficulty.

(340.) To change a type-face for any reason, extract the old with pliers, and insert new with top of letter to the front ; depress the letter key gently until the type comes through the center guide squarely, then strike a few smart blows and the change is made.

(341.) If it is desired to have the least noise possible, take off the shields from the back and sides of the machine. Of course it is better to do this when the machine is kept in a drop cabinet desk than if exposed to more or less dust.

(342.) If two or more types collide and catch, which is a consequence of faulty finger action, the jam may be broken by striking a key actuating a type-bar on the opposite side of the basket. A little investigation will show which keys are opposite one to another. If this does not accomplish it, tap the elbow of a lever, which will surely make the type-bar return to place. This may be done with a pencil conveniently at hand, and so save soiling the fingers.

(343.) To make corrections after the paper has been removed, replace so that the bottom of the printed line will rest evenly and exactly upon the steel strip, technically called the "paper blade." Turn the roller forward one cog or click, and *adjust by the pointer* ; remembering that the latter directs to the middle of a letter when one is printed, and, therefore, should point to the center of the place where the letter is to be inserted.

(344.) In press copying be sparing of the water. The best results are obtained from a fine grade of cotton cloth, or, better still, from the cloths furnished by the machine people, which are of the same material that goes into typewriter ribbons. This should be soaked and wrung out smartly, when just moisture enough will be retained, and a comparatively inexperienced person can produce a successful copy.

(345.) If blotters are used for copying they must be dampened *evenly*. Our opinion is that the writing from a pad demands less water for reproduction than either ribbon or hand writing. In the case of a ribbon machine the copyist inspects the work, and if a fresh ribbon has apparently been used he gives the blotter less moisture. It seems reasonable that the same watchfulness should be exercised in connection with the pad. Note the delivery of the ink, and moisten or dry the blotter accordingly. A new pad obviously requires less water for copying than one which has been in use eight or ten months.

(346.) The center guide is one of the most interesting features of this machine, but the operator should *never* meddle with it under any circumstances. It should never be raised, lowered or taken out. It will undoubtedly last as long as the rest of the machine. It was never intended to be disturbed, and a little study will show that the more sheets of paper are inserted the nearer the center guide the outside sheet will come. The machine is adjusted so that the types will reach, and print plainly, on *one sheet of thin paper*, and when manifolding the situation regulates itself; inasmuch as every additional sheet makes the types strike much harder, the printing surface being brought nearer to the guide, and the alignment is preserved, no matter how many copies are taken. As a matter of fact the type is not stopped by the guide, but by the *paper* against which it strikes.

(347.) The carriage may be quickly removed by detaching the cord underneath the bearing, raising the latch behind the paper table, and sliding off to the right. To restore to machine, reverse the process.

#### NAMES OF PERSONS, CITIES AND STATES.

|        |                 |                 |               |                     |               |
|--------|-----------------|-----------------|---------------|---------------------|---------------|
| (348.) | 2 3 4 1 2 1 1 3 | 1 2 4 3 3 3     | 3 4 1 1 1 2 3 | 1 3 3 1 3 1         | 2 2 3 2 2 3   |
|        | Clarence        | Brazos          | Xanthus       | Boston              | Mexico        |
|        | 1 2 3 1 3 1     | 1 3 1 4 1 3 3 4 | 3 2 3 4 2     | 1 2 3 1 2 2 1 4 2 1 | 2 3 1         |
|        | Newton          | Venezuela       | William       | New Britain,        | Conn.         |
|        | 2 3 1 2 1 1 3 1 | 1 1 2 1 3 1 3   | 2 3 3 1 4 1 2 | 1 1 1 4 3           | 2 1 4 1 3 2 3 |
|        | Covington       | Burgoyne        | Cleveland     | Buffalo             | Charles       |

|                                                |                                           |                                          |                                                |                                                     |
|------------------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------------|-----------------------------------------------------|
| <b>1 4 3 1 2 1 3 2 3</b><br>Baltimore          | <b>1 2 3</b><br>New                       | <b>1 2 3 1 3 2 1 2</b><br>Brunswick<br>2 | <b>2 1 2 2 4 1 3</b><br>Chicago                | <b>1 2 1 2 4 4 3 2 3</b><br>Minneapolis<br>2        |
| <b>1 3 2 4 2 1 1 4</b><br>Vera Cruz            | <b>2 3 1 1 4 1 4</b><br>Montana           | <b>1 1 4 1 1 3 1 3</b><br>Byzantine<br>3 | <b>1 2 3</b><br>Mississippi                    | <b>4 1 2 2 1 2 1 4</b><br>Virginia                  |
| <b>2 2 4 1 2 3</b><br>Memphis                  | <b>1 1 2 3 3 1 3 2</b><br>Brewster        | <b>1 2 3 1 3 2 2</b><br>New York         | <b>1 3 1</b><br>John<br>2                      | <b>2 4 2 3 1 3 1 3 3 1 3 1 3</b><br>Marston & Stone |
| <b>3 4 3 1 2 1 1 1 3 1</b><br>Washington       | <b>2 4 1 3 4 3 2 2 1 1</b><br>Kansas City | <b>1 2 3</b><br>New Orleans              | <b>2 3 3 4 1 3</b><br>2                        | <b>2 3 1 3 2 1 2 2 1 1</b><br>Connecticut           |
| <b>2 4 3 2 1 3 2 1 2 4</b><br>California       | <b>2 3 1 1 4 3 3 2 3 2</b><br>Montpelier  | <b>1 2 4 1 2</b><br>Frank                | <b>1 1 3 2 3 2 1 3</b><br>The Collins<br>2     | <b>2 4 1 2</b><br>Manu-                             |
| <b>1 4 2 1 1 2 2 1 1 2 3</b><br>facturing Co.  | <b>3 2 4 1</b><br>Omaha                   | <b>3 1 3 1 2 3</b><br>St. Louis<br>2     | <b>2 3 1 1 2 3 4 3</b><br>Montreal             | <b>1 2 2 1 4 1 2</b><br>Richard                     |
| <b>2 3 1 3 3 1 3 2 3</b><br>Johnson & Co.<br>2 | <b>1 4 2 3 1 4</b><br>Tacoma              | <b>2 1 3 1 1</b><br>Duluth               | <b>3 4 2 2 1 1 2 3 3 2</b><br>Springfield<br>2 | <b>4 1 2 3 4</b><br>Phila-                          |
| <b>2 3 3 4 1 2 4</b><br>delphia                | <b>4 1 3 4 1 1</b><br>Atlanta             | <b>3 2 4 1 3 3</b><br>Seattle            | <b>4 4 3 4 1 2 4</b><br>Palatka.               |                                                     |

(349.) The compactness and light weight of this machine makes it convenient for carrying about, notably for the court reporter having a circuit extending over considerable territory, the traveling correspondent, and the private secretary to a traveling man.

(350.) Attention is directed to the facsimile work performed on the Yost as presented upon the following pages. The greater portion of this is not difficult to execute, now that a model is furnished, but the more elaborate borders on page 110 require explanation. Their compactness and symmetry depend partly upon a re-adjustment of the paper after each line written. This is easily done by the pointer. For instance, in the top border, after striking ( ) and U, and turning the roller forward one click, it will be necessary to pull the paper down about  $\frac{1}{16}$  of an inch, in order that the ) of the next line will touch the combination above. After one or two trials this becomes an easy matter.

## LIFE INSURANCE IN VARIOUS COUNTRIES.

| Countries.         | Insurance in Force. | Year's Premiums. | Year's Losses. |
|--------------------|---------------------|------------------|----------------|
| United States..... | \$8,122,374,190     | \$164,370,176    | \$87,309,377   |
| Great Britain..... | 2,167,100,000       | 70,672,069       | 52,522,845     |
| Germany.....       | 628,623,102         | 24,783,741       | 10,599,257     |
| France.....        | 554,072,737         | 22,017,407       | 8,314,952      |
| Austria.....       | 191,843,009         | 12,507,691       | 2,628,842      |
| Scandinavia.....   | 53,011,561          | 1,722,207        | 415,637        |
| Russia.....        | 47,925,979          | 1,757,681        | 584,707        |
| Switzerland.....   | 38,908,928          | 1,317,467        | 923,679        |

## ACCOUNT OF EXECUTOR:

The first account of John Doe, executor of the last will and testament of Richard Roe, late of New York, in the County of New York, deceased:

Said accountant charges himself with the several amounts received as stated in schedule A herewith exhibited,.....\$86,388.62  
 And asks to be allowed for sundry payments and charges as stated in schedule B herewith exhibited,.....20,720.25  
 Balance,.....\$65,668.32

(Signature) Executor.

The undersigned, being all the parties interested, having examined the foregoing account, request that the same be allowed without further notice.

(Signatures of the widow and all the heirs and legatees.)

## Schedule A.

Amount of personal estate according to inventory.....\$60,480.00  
 Balance of former account,..... 9,408.62  
 Amount received from gain on sale of personal estate over appraised value, and from other property as follows:.....16,500.00  
 Total.....86,388.62

## Schedule B.

Amount paid out and charges as follows:

1. For funeral expenses and expenses of last sickness.. \$1,260.00  
 2. For charges of administration,... 1,000.00  
 3. For debts of the deceased..... 8,460.00  
 4. For amounts paid to legatees and heirs,.....10,000.25  
 Total.....20,720.25

THE EASY CHAIR.ACT II.Scene 1.

(Scene: A sitting room, plainly but neatly furnished. Table C. Easy chair R. Grate fire L.)

(HENRY discovered at table looking over some old letters.)

Henry.

I am sure it must be among these old letters. It's one of my strong points that my memory in these matters always serves me well. If Rose could only know the sacrifice I have made for her, I'm sure she could not treat me so coldly. But soft! Here she is!

(Enter ROSE, R.U.E. in street costume. Henry rises to greet her. She meets him indifferently.)

Henry.

Good morning, Miss Moulton. You see I have not forgotten my promise to you of last evening. My fingers are nearly worn out handling this antiquated stuff.

(Pointing to letters.)

Rose.

I am sorry, Mr. Grannis, to have put you to so much trouble, but I am sure your own vindication demands it.

Henry.

You are right, and it shall be my first duty to satisfy you of my integrity. It is over five years since I have looked upon my father's handwriting.

(Again searching among letters.)

Here is one from my brother Frank. Do you remember him?

Rose.

(Taking letter eagerly) Was he not in the army at one time?



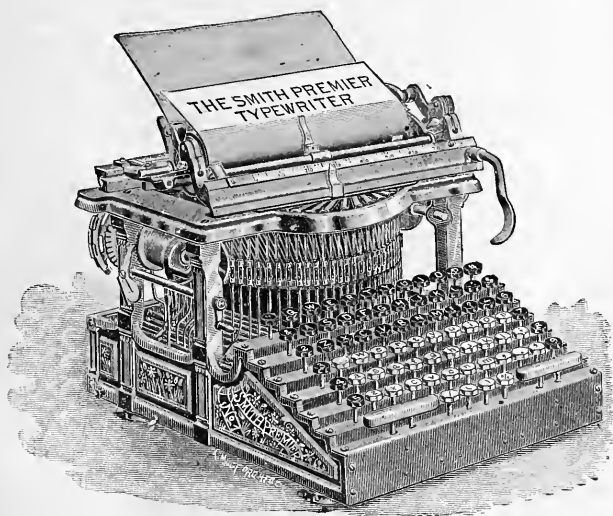


## SMITH PREMIER.

## FINGER METHOD.

(351.) In directing attention to the accompanying diagram, it is hardly necessary to remark that it represents only the white keys, namely, lower case ; and that there is an upper manual above this of black keys, showing the capitals in exactly the same order of arrangement.

(352.) A general idea of the fingering of the letters can be derived from this diagram. It will be noted that there is a division of the manual into right and left-hand



THE SMITH PREMIER MACHINE

territory, and that along the line of this division the "guide" keys, so called, *TY*, *GH* and *BN* of the respective banks of letters, are to be attacked by the index fingers. The next vertical rows at each side of this imaginary partition are depressed by the first or second fingers, the first having the preference ; the second being principally used when a guide key precedes. The next two rows are manipulated by the second and third fingers respectively of each hand as set forth in the diagram.

(333.) The fourth fingers have double duty with the last row of letters and the adjoining figures; the latter, however, make light demand upon the fingers, having no part in word structure.

(354.) The sub-figures in the diagram denote that for some sequences of letters an alternation of fingers is permissible. For instance, A takes the third finger when followed by Q, and S takes the second after W. A few similar cases are covered by paragraphs 16

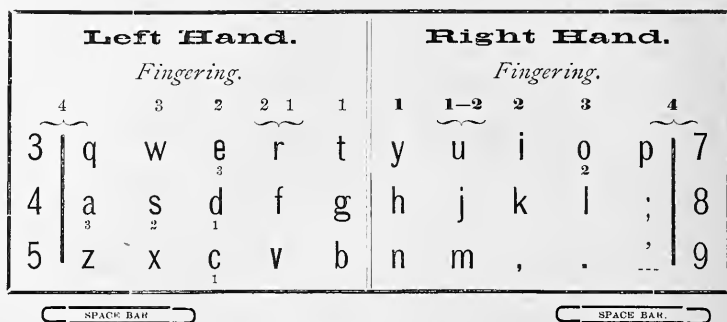


DIAGRAM OF KEYBOARD.

and 41. On account of the vertical lines of the keyboard, when two guide keys are consecutive the *upper* takes the second finger with more grace.

(355.) This machine has two space-bars, one for each hand, which are designed to be depressed by the little fingers; for inasmuch as the thumb cannot be utilized, the shortness of the fourth finger makes it the alternate for this space-bar duty. We grant that this usually weak member has enough work assigned to it upon the keyboard, but the remarkably easy action of this machine removes all grounds for complaint, and makes it possible for the little finger to perform the most exacting duty without much difficulty or fatigue.

(356.) Theoretically it would seem proper to attack the space-bar *with the hand not to be engaged with the first letter of the next word*, but, as a matter of fact, operators upon the machines equipped with a double bar rarely use more than one hand. It becomes a habit to employ one hand, either the right or left, as the writer may prefer, and one spacer is habitually ignored.

(357.) For the first task commit the above diagram to memory. Then next in order the keyboard as a whole, taking note of the figures and characters in the margin.

(358.) Practice at first wholly upon the lower manual, consulting paragraphs 243 to 246 as well as 21 to 25 all inclusive ; dwelling upon the same until the letters and their proper attack are the property of head and hand. If the fourth fingers are weak, strengthen by practice upon paragraphs 201 and 202.

(359.) Note that figure one is made by lower case *el*, and the cipher by capital O. Do not pound the keys ; a very light touch will suffice.

(360.) Next proceed by way of paragraphs 26 to 32 inclusive ; after which pass to the upper manual, employing paragraph 308 as a step thereunto. Supplement this study by paragraphs 37 and 38.

(361.) Practice also upon the exceptional fingering contained in paragraphs 41 and 42 ; then Miscellaneous Words (51 to 58), and next in order 59 and 60, following same by the sentences given at the end of this chapter.

(362.) In a book of such composite character we can only outline the work ; no very serious attempt has been made to assign tasks. The learner by self-instruction will do well to study most those parts which come the hardest, and the teacher will lay out lessons suited to the varying capacity of his pupils. But be it personal investigation or study under the direction of an expert, do not undervalue the importance of correct procedure. Work faithfully upon these exercises, and the period of labored painstaking will be succeeded by the time when attention to all these petty details will become mechanical, and graceful writing follow as a matter of course.

#### SMITH PREMIER INFORMATION.

(363.) Features of this machine are :—Uniform and agreeable key action, ready visibility of the writing, economical ribbon feed, locking mechanism at end of line, double keyboard, single scale, removable platen, firm paper feed and easy release, carriage bearings and permanent alignment.

(364.) Feed the sheet of paper between the platen and the paper-apron with the left edge always projecting beyond the end of the rubber roller about one-eighth of an inch, then turn the platen with the hand or the carriage lever, at the same time depressing the paper finger with the other hand. The projecting edge of the paper shows its progress, and gives a hint when the bottom of the paper is reached.

(365.) The paper-finger, so called, is a great convenience when feeding the paper. Do not forget its action.

(366.) For the better preservation of the platen, a backing-sheet may be used. One of the thickness of ordinary writing paper will have no appreciable effect upon the alignment.

(367.) To release the paper, give the paper-apron a slight movement toward the front, which allows a perfectly free withdrawal of the work, and is of obvious advantage when removing many sheets with carbon between. Or pull the paper forth the usual way.

(368.) The firm paper feed makes it possible to address envelopes and postal cards neatly. Insert at either right or left of the roller. The carriage will accommodate a nine-and-a-half-inch envelope.

(369.) To insert an omitted letter before the paper has been removed, display the printed line according to directions, and move the carriage until the vacant space is opposite the index or pointer; then return the roller to printing position and strike the desired letter.

(370.) The roller can be revolved freely in any direction by pressing the release-lever on the platen frame at the right with the thumb, and turning the roller with the forefinger. This becomes necessary when correcting an error made several lines back, or when moving the paper either backward or forward for any purpose whatever.

(371.) The machine has two widths of line spacing. The oscillation of the carriage-lever actuates the pawl at the rear right end of the platen. Below the pawl is a line space regulator, which in one position allows the roller to turn for one, and when in the other position two teeth, which accomplishes single and double line spacing.

(372.) The lever or carriage-arm at the right is employed to draw the carriage back at the finish of each line of printing, and at the same time to turn the roller so as to feed the paper for a new line. This lever is best operated by the thumb of the right hand. Simply pulling to the right returns the carriage to point of beginning, but oscillating the arm makes the cylinder revolve one or more spaces for a new line.

(373.) The carriage tension is regulated by means of the small crank at the left front of the iron machine frame. Turning this to the right increases the tension, and to the left diminishes the same, one or two revolutions being required to produce a perceptible effect. But do not meddle with any of the tensions until thoroughly acquainted with the typewriter.

(374.) Do not tamper with the key tension. The "rocking-shaft" mechanism produces a most delightful action, and the machines are originally adjusted at a low tension, which is most proper for comfortable operation. It is hard to understand why anybody should prefer stiff action to easy, and for the beginner we recommend as light a touch as is compatible with the perfect movement of the machine.

(375.) By depressing the small lever at the left front of the carriage the latter may be moved to any position, back and forth, upon the scale, and stopped at any desired point. The carriage moves freely to the right by simply pushing it at any point of contact.

(376.) To inspect the writing, pull the roller forward with the left hand by means of the projecting axle. The line of print will appear above the scale. Return with the fingers upon the axle, so as to ease it down the "ways."

(377.) To remove the platen, pull it half way forward with both hands applied to the axles, lift slowly and swing from the back of the carriage toward the front until the paper-apron appears at the front ; then drop the axles from the hooks, being careful not to release your hold until the platen is entirely free from the machine. To restore, catch the axles in the hooks, having the paper-apron to the front, then rest the axle ends firmly upon the forefingers, place the thumbs on the rod back of the apron, throw the platen over, and with the thumbs guide until it drops into the carriage frame.

(378.) Easy regulation of either right or left margin is explained in the book of directions ; though, if it is desired to make a marginal note or correction, press the release-lever at the left front of the carriage, and the paper can go to the right to the utmost limit. When writing in the margin, be careful not to encroach upon the body of the work. The next line will begin at the point for which the margin is set, unless the lever is again exerted.

(379.) When it is desired to set the back margin regulator in its normal position, disengage its teeth by aid of the lever at the back of the type-basket, at the same time pushing the carriage to the right as far as it will go.

(380.) The locking mechanism is adjusted so as to operate at 50, allowing a margin at the right of 20 degrees of the scale. If this does not provide the proper stop for writing upon paper of note size, insert same at the right, and regulate the left margin.\*

---

\*We are advised that the limit of both margins will be increased ere long, so that either can be operated at least thirty points.

(381.) An economical ribbon-feed is a feature of this machine, which utilizes the ribbon across its whole width while printing each line. The return of the carriage sends the ribbon backward over the top of the basket, at the same time feeding it from spool to spool about one-sixteenth of an inch. The entire length and width is exhausted of its pigment, there is no curling or bulging in any part, and the writing has a uniform appearance.

(382.) Study carefully the directions with regard to changing the ribbon. The *direction* of the ribbon feed may be *reversed* at any time by running the carriage to 70 of the scale, which permits the throwing out of one pawl, and adjusting the other for engagement with its spool. The ribbon will feed toward the spool which is in engagement with its pawl.

(383.) The standard length of the typewriter ribbon is nine yards. Below is given a list of the variegated ribbons on the market:

|                        |                       |
|------------------------|-----------------------|
| Black, copying Purple. | Black, copying Green. |
| Black, copying Blue.   | Purple Copying.       |
| Green Copying.         | Blue Copying.         |
| Red Copying.           | Black, Non-copying.   |
| Blue Non-copying.      | Green, Non-Copying.   |
| Purple, Non-copying.   | Red, Non-copying.     |

Indelible Copying, writes Black, copies Blue.

Hectograph, Lithograph.

(384.) When making titles, etc., all capitals, it is more convenient when using a double keyboard machine to execute the letters with one hand, operating the space-bar with the other.

(385.) As the carriage does not lift, in the sense generally understood, and it not being expedient to remove the platen every time a key becomes filled with dirt, the brush arrangement for giving the types a universal cleaning comes in handily. To operate this bring the platen forward, leaving the work within the rollers, set the carriage at 70 of the scale, which throws the ribbon forward and out of the way of the brush crank. Before beginning to turn the latter, see that every type-bar is back against the cushion. The improvement in the quality of ribbons as now manufactured makes but little cleaning of types necessary. Once a day will be found sufficient for the use of the cleaning brush.

(386.) A character can be made above the general alignment (as 60°) or below it (as in chemical formulæ), by depressing the release at the front of the roller frame, and

turning the roller forward or back with the same hand, holding firmly while the imprint is being made. In the same manner write e ç é §, etc.

(387.) Combination characters like a, c, R, M, etc., are written by holding down a space-bar while striking both keys.

(388.) Stencils for the Mimeograph, or a similar duplicating process, are well made, and manipulation of the paper-apron when withdrawing the work from between the rolls prevents wrinkling. General instructions regarding the preparation of such work may be found in paragraphs 177 to 182 inclusive.

(389.) For manifolding, apply the hard rubber platen which is furnished for this purpose. This not only makes the work much easier, but it saves the softer platen from becoming indented by the unusually hard action of the types which manifolding demands.

(390.) When it is desirable to give the platen many revolutions, either one way or the other, pull same to the front and turn with the thumb pressed upon the platen release-lever. The movement to the front exhibits the contents of the page, and shows how far to move the paper.

(391.) Before oiling wipe off all accumulations of dust, etc. Oil the "ways" of the platen axles as often as may be necessary to keep them working smoothly. Oil once a month the grooves in which the carriage-bearing balls run. Also occasionally apply a very little to the ribbon-spool shafts. Oil the type-bar bearings with a splint at intervals of from sixty to ninety days. Keep the teeth of the feed rack slightly oiled, and at rare intervals put a drop in the oil-hole of the back feed-pawl arrangement.

(392.) Operators by the two-finger style sometimes hold the third and fourth fingers curled up in the palm of the hand. We are told this unnatural position makes the little finger ache, if maintained for a long time, which is good argument in favor of distributing the labor over the whole hand.

(393.) The question of a tariff of rates for typewriter copying has always been a debatable one, so much depends upon circumstances. Factors in the problem are these: Is the work difficult or easy? Is the job a large or small one? Are there more copies than one? Have you had much work from the same customer? Must it be done in a hurry? Will it be dictated to the machine? Have you got to supply correct punctuation, etc., when the copy is bad? Will it be from shorthand notes taker

in dictation? All these are important considerations, and have a part in the fixing of rates.

(394.) A fair schedule of prices, subject to change as one or another of the above factors exert an influence, is the following:

|                                                           | Per 100 Wo ds. |
|-----------------------------------------------------------|----------------|
| For one copy of less than 5,000 words.....                | 05             |
| Each additional copy by manifoldng.....                   | 03             |
| One copy, ordinary matter, 5,000 words or over.....       | 04             |
| Each additional copy of same.....                         | 02             |
| Dictation in Shorthand, and transcription on machine..... | 20             |
| Dictations taken direct upon the Typewriter.....          | 15             |
| Each additional copy of either of such dictations.....    | 05             |
| Shorthand dictation at customer's pleasure, per hour..... | \$1.00         |
| Transcript of the same at above rates.                    |                |

### SENTENCES FOR PRACTICE.

(395.) "Now is the time for all good men to come to the aid of the party."

Memorize the fingering of the prefixes and affixes, for use in all writing.

Acting from policy rather than from Christian principles.

Names of some persons, cities and States can be found on page 105.

"Christmas—receiving what one does not want, and giving what one cannot afford."

A chain sentence is one in which the last letters of words are the first letters of words following.

Industry often supplies the lack of talent, and learning often consists in knowing where knowledge may be found.

The primary part of Typewriting for the Blind furnishes excellent practice for the beginner.

Waiting for opportunity is like betting on the weather.

Tabular and fancy work is improved by red ink ruling, only do not overdo it.

When acknowledging a business letter always give the date.

A bicycle reform—"Out of this nettle danger we pluck this flower, *safety*,"

For words made up of letters in the top bank of keys, see paragraph 247.

To know the value of a dollar, earn it.

Learn to write from good, legible copy straight down the page without a pause.

Don't pour on oil when the machine needs lubricating ; a drop is as good as a quart.

When opportunity offers to do a nice job, utilize a pretty form of border, and make the result extract a smile from your employer.

For left-hand practice, see paragraph 25, page 7.

I am afraid my former high esteem of his preaching was more out of opinion than judgment.

I see no content or satisfaction anywhere in any one sort of people.

Fair or foul, come what, come when, we will have our way at last.

"Strength of mind is exercise, not rest."

(396.)

New York, Jan. 15, 1891.

CALEB ANDERSON, Solicitor,  
Quebec, Canada.

Dear Sir :

25 Your esteemed favor of the 12th inst. is at hand and contents noted. |

It would seem to us that the communication had better be addressed to your  
50 agent who is to blame in this matter, and not to | us. If they protested a draft they  
75 ought not to have, and want to make you pay \$1.78 for doing it, then you should see |  
that your agent straightens it out.

The First National Bank in presenting the draft here acted as your representative  
100 and not ours, and as the | papers were not in accordance with the terms of the draft,  
we declined to honor it until the same were put in proper shape.

25 We | must respectfully refer you to your own agent, the First National Bank of  
50 this city, or the bank through which the draft was sent, for any corrections or |  
changes you may desire to make in the collection of the money.

Sincerely regretting this complication, we are

172

Yours,

(397.)

Boston, January 15, 1890.

Mrs. ELIZABETH LATHAM,  
Towanda, Pennsylvania.

Dear Madam :

Your esteemed favor received, and we note your inquiries and comments re-  
25 garding the rate | of interest you are receiving upon your investments. There has  
been quite a reduction in the rate of interest obtainable upon first-class securities  
50 during | the last decade, and it has, of course, affected the income you would receive  
from your bonds.

75 Twelve or fifteen years ago six per cent | city bonds sold below par, and many

of them are now selling at from twenty to sixty per cent premium ; railway bonds  
 100 yielding seven and | eight per cent were selling below par, and now sell (if they  
 25 have a long time to run) from fifteen to forty-eight per cent | premium, making the  
 net income realized from these bonds in many cases less than four per cent ; very  
 50 few first-class railway bonds, and no | first-class city bonds can now be purchased  
 75 to pay a rate of interest much above four per cent, while bonds of such cities as |  
 New York and Boston sell at a price that yields the investor two and three-quarters  
 200 to three and three-quarters per cent per annum. |

Only about twelve or fifteen years ago mortgages could be placed in New York  
 25 at seven per cent, and in the West at from nine | to twelve per cent ; whereas, now,  
 first-class mortgages in New York are placed at four and one-half per cent, and in  
 50 the West | at from five to six per cent generally.

From the above phase of the financial situation, you will naturally infer that  
 75 you are but one | of many who are not realizing from their investments as much as  
 they formerly did.

300 This is something we are not accountable for, and we | can only hope that the  
 future will make a better showing for us all.

316 Yours respectfully,

(398.)

Hartford, July 2, 1890.

Mr. WINSLOW JOSSLYN, Manager,

C o l u m b u s , O h i o .

Dear Sir :

25 Yours of the 2d instant in re policy No. 08,097, Blaisdell, is at | hand.

This policy was originally issued as a ten-payment life for \$2,500, requiring the  
 payment of an annual premium of \$181.13.

50 The premium, instead | of being paid entirely in cash each year, was settled  
 75 partly by note ; that is, a portion of each year's premium was borrowed of the |  
 company, and a note given for the same.

The balance of the note now outstanding as a lien against the policy represents  
 100 a portion of | the money borrowed of the company by Mr. Blaisdell, and used in  
 settlement of the ten years' premiums.

25 The policy is not entitled by its | terms to any cash surrender value, nor could  
 we offer to issue for the surrender of it a fully paid-up policy, cancelling and return-  
 50 ing | the premium note.

If it were possible for Mr. Blaisdell to pay the note in cash, the policy would  
 75 then be a fully paid-up | life for \$2,500 ; or, if he could not pay the note in full, a  
 200 partial payment on it would reduce the interest payments each year. |

Kindly submit these suggestions to him, and advise us of his decision.

214

Yours truly,

(399.)

Augusta, Me., May 1, 1890.

ALPHEUS HEMINGWAY, ESQ.,

014 Broadway, New York City.

Dear Sir:

25 Your favor of the 28th ult., enclosing copy of complaint | in the Wardwell case,  
is received.

You know I have no experience in, or knowledge of, your system of pleading in  
50 New York, upon which | I can rely. I can only say, that if pleadings of this char-  
75 acter were made in a suit here I should demur the first thing | I did, with a feeling  
of absolute certainty that I should prevail upon the demurrer. And I have an  
100 impression that if you demur they | probably will ask leave to amend, as I suppose  
25 they will be allowed to do on the payment of the trifling bill of costs; so | that, as  
far as my advice goes, I must leave it entirely to you, simply saying what I should  
50 do if it was here, which | seems to me to be the proper course for you to take there.

166

Yours very truly,

(400.)

Chicago, December 20, 1890.

Messrs. BURNHAM, CAXTON &amp; CO.,

Hartford, Conn.

Dear Sirs:

Your attention is respectfully invited to the following statement concerning the  
25 bonds | issued by the School District of Kansas City, Mo.: Corporate Name, School  
District of Kansas City, Jackson County, Mo. Amount of Bonds in this Issue, |  
50 \$150,000. Denomination, \$1,000. Rate of Interest, four per cent. Interest paya-  
ble, semi-annually (January and July.) Where payable, New York City. Purpose  
issued, building school houses. When dated, July 1, 1890. Time to run, twenty  
years (straight). When due, July 1, 1910. Authorized by vote of the people at  
election held April 8, 1890, under sections 8,106-8,107, Art. 3, Chap. 143, Revised  
Statutes of Missouri, as amended 1889. Result of election, votes "for," 13,154;  
"against," 369. Total previous indebtedness, \$614,500. Value of school property  
in the school district unincumbered, \$1,400,000. Assessed valuation (based upon  
about forty per cent of actual value) of district, \$75,000,000. Population, 225,000.  
Rate of taxation, State and County, 13 mills on assessed value; City, 12½ mills.

A strict compliance with the law has been observed in authorizing this issue  
of bonds. They will be registered with the State Auditor. The issue of \$75,000  
four-per-cent twenty-year bonds, July 1, 1886, sold for \$1.01½. The issue of \$100,000  
four-per-cent twenty-year bonds, July 1, 1887, sold for \$1.017-10. There was no  
issue in 1888. The issue of \$200,000 four-per-cent twenty-year bonds, July 1, 1889,  
sold for \$1.02¾. There has never been a default in the payment of principal or

interest. A tax levy has been made by the Board (as authorized by law), for the purpose of creating a sinking fund for the payment of bonds as they mature, and the present amount in said fund is more than sufficient to pay the first three issues of bonds falling due, to wit: in 1892, 1894, 1895.

Following will be found a tabulated statement of the bonded debt of the School District of Kansas City, Mo. There is no floating debt.

#### TABULATED STATEMENT,

*Showing the Bonded Indebtedness of the School District of Kansas City, Mo., May 1, 1890.*

| When Issued. | When Due.    | Where Payable. | Purpose Issued. | Denomination. | Rate of Interest. | Total.    |
|--------------|--------------|----------------|-----------------|---------------|-------------------|-----------|
| Dec. 1, '72  | Dec. 1, '92  | New York       | Renewal         | \$1,000       | 10                | \$ 30,000 |
| Jan. 1, '74  | Jan. 1, '94  | New York       | Renewal         | 500           | 10                | 10,500    |
| March 1, '75 | March 1, '95 | New York       | Renewal         | 500           | 10                | 10,000    |
| July 1, '75  | July 1, '95  | New York       | Renewal         | 500           | 10                | 25,000    |
| July 1, '76  | July 1, '96  | New York       | Renewal         | 500           | 8                 | 12,000    |
| Jan. 1, '77  | Jan. 1, '97  | New York       | Renewal         | 500           | 8                 | 7,000     |
| July 1, '80  | July 1, 1900 | New York       | Renewal         | 500           | 6                 | 10,000    |
| July 1, '80  | July 1, 1900 | New York       | Renewal         | 500           | 6                 | 25,000    |
| July 1, '81  | July 1, 1901 | New York       | Renewal         | 1,000         | 5                 | 50,000    |
| July 1, '85  | July 1, 1905 | New York       | Building        | 500           | 5                 | 60,000    |
| July 1, '86  | July 1, 1906 | New York       | Building        | 500           | 4                 | 75,000    |
| July 1, '87  | July 1, 1907 | New York       | Building        | 500           | 4                 | 100,000   |
| July 1, '89  | July 1, 1909 | New York       | Building        | 1,000         | 4                 | 200,000   |
|              |              |                |                 |               |                   | \$614,500 |

We offer \$150,000 of the four-per-cent twenty-year School bonds, subject to previous sale, and commend them to your notice as an excellent investment.

Yours respectfully,

(401.)

PERKINS INSTITUTION FOR THE BLIND,  
South Boston, Mass., November 29, 1890.

Dear Sir:

25 Your favor of the 19th inst. is at hand. You will pardon | my long delay in  
answering it, as I was away when it reached here and did not return until this  
50 morning. I will first try | to answer your questions in order.

1. Typewriting is now so common among the blind that it is hardly deemed an accomplishment.

75 2. The degree | of accuracy attained is, I think, not less than that of the seeing.  
Seventy words a minute is not an uncommon speed.

100 3. I know | of a few blind persons who make typewriting a business, and of  
one or two who have done government work.

25 4. Typewriting is now systematically | taught in many of the schools for the  
blind. An all-figure method is the only practical one for us.

50 Let me thank you for | the many new ideas I have received from your book.  
 It seems specially adapted to the needs of blind operators. But every operator  
 75 should adopt | a scientific method of fingering from the first, and I wish "Practical  
 Typewriting" as large a circulation as the Remington typewriter.

Very sincerely yours,

THOMAS | H. WILSON.

200

206 To Mr. Bates Torrey.

(401½)

Cleveland, Ohio, October 17, 1892.

Messrs. DENMAN, WHEELER & CO.,

Dubuque, Iowa.

Gentlemen :

25 Since the receipt of your letter of the 23d of | August, concerning official copy  
 of Professor Chandler's patents, we have been actively engaged in trying to  
 50 determine exactly what to do. In looking over our | patents we find we possess  
 two documents, the originals of which we herewith enclose. These are both in the  
 75 French language, and one is signed | by the Cleveland Electric Company, and the  
 other by Professor Chandler. Just what the difference between these two docu-  
 100 ments is we are unable to say, | but presume they are both necessary for your  
 purpose, and you are at liberty to use them with due discretion.

25 It would seem that these | ought to cover the ground entirely, and the originals  
 you must be extremely careful not to lose. These papers were carefully prepared  
 50 by the proper | authorities, and sent here for signature, and we suppose the  
 75 record of transfer was made in France at the time. Fearing this may not be |  
 enough, we had a copy of the original assignment by Professor Chandler of the  
 200 Boston Electric Company executed with all the filagree work that was | asked for in  
 your letter.

We send you these by registered package under another cover, and hope they  
 25 will reach you safely, and lead to | an immediate consummation of the business.

We trust that it will not be necessary to have anything sent back here for signature.

50

Very truly yours, |

P. S.—If our action in this transaction has not been entirely satisfactory, advise  
 272 us and we will seek further to accommodate you.

## NEW YORK SUPERIOR COURT, Part 2.

Francis W. Brodie ."  
vs "  
James O'Brien, Sheriff. "  
"

Before Judge Sanford and  
a Jury,  
New York, May 18, 1876.

For Plaintiff,  
SMITH & COOPER, Esqs.

Appearances:

For Defendant,  
VANDERPOEL, GREEN & COE, Esqs.

Mr. Smith opened for plaintiff.

FRANCIS W. BRODIE, pl'ff., sworn. Direct examination.

Q. What is your business? A. Furrier.

Q. How long have you been engaged in business as a furrier?

A. Since 1865.

Q. Previous to that time in what business were you?---I mean previous to 1865?

A. I was engaged in the lottery business. I was out during the war, and speculated a little in Kentucky.

Q. What business was your father in in 1865?

A. The first part of the year he was in the fur business.

Q. Where was his place of business?

A. At this time, when I bought him out, it was at 85 Maiden Lane.

Q. (By the Court). By "this time" you mean 1865?

A. Yes, sir.

Q. Do you know the fact that the firm Willis, Green & Jones had a contract with the defendant in this case to sell and deliver a certain number of carboys of oil?

(Objected to as immaterial, being res inter alios acta.  
Objection overruled---exception taken.)

A. Certainly I do.

Q. Do you remember the date of that?

A. I cannot remember the date exactly. It was in February or March of 1872, but upon my word I cannot remember.

The witness states that he did not notice the word "defendant" in the next to the last question, and adds that there were two parties instead of one.

Plaintiff's counsel moves to strike out both question and answer as immaterial.

Q. I ask you whether you remember that document,--what it is, and whose signature that is.

(Hands witness a paper. Objected to.)

Q. Whose signature is that? Do you recognize the signature?

A. I recognize it, yes sir.

Q. Could you swear to the identity of that piece of writing?

A. Yes sir, positively.

THE NATURE AND PROPERTIES OF PLEADINGS IN CONFESSION AND AVOIDANCE.

First, with respect to their division.

(199)

Of pleas in confession and avoidance, some are distinguished (in reference to their subject matter) as pleas in justification or excuse, others as pleas in discharge (a). The pleas of the former class show some justification or excuse of the matter charged in the declaration: those of the latter, some discharge or release of that matter. The effect of the former, therefore, is to show that the plaintiff never had any right of action, because the act charged was lawful; the effect of the latter, to show that though he had once a right of action, it is discharged or released by some matter subsequent. Of those in justification or excuse, the plea of non assault demesne (b) is an example; of those in discharge, a release (c). this division applies to pleas only; for replication and other subsequent pleadings, in confession and avoidance, are not subject to any such classification.

(a) Com. Dig. Pleader, (3 M 12)

(b) See this plea, supra, 163.

(c) See this plea, supra, p.53.

As to the form of pleadings in confession and avoidance, it will be sufficient to refer the reader to the examples in the first chapter (d), and to observe that, in common with all pleadings whatever, which do not tender issue, they always conclude with a verification (e).

(d) Supra, pp. 53, 60.

(e) See post, Sect.VII. Rule VI.

With respect to the quality of these pleadings it is to be observed, that it is of their essence (as the name itself imports) to confess the truth of the allegation which they propose to answer or avoid. It was formerly the practice in many cases to frame such pleas with a formal confession or admission in terms, using the introductory phrase of---true it is that, etc., and then proceeding to plead in answer to the matter thus explicitly admitted. But this method is not required by the rules of pleading, and with a view to brevity, it is now generally abandoned. Thus in the example formerly given of a plea of release to an action for breach of covenant(f), the evident tendency of the plea is to admit that the defendant did, as alleged in the declaration, execute the deed and break the covenant therein contained.

(200)

(f) Supra p.53.

THE QUANTITIES OF YARN SPUN, EXPORTED  
and consumed at home:

| Years | Yarn Produced | Exported    | Consumed at Home |
|-------|---------------|-------------|------------------|
| 1870  | 942,460,000   | 186,078,000 | 756,382,000      |
| 1871  | 1,072,850,000 | 193,480,000 | 879,370,000      |
| 1872  | 1,040,380,000 | 211,940,000 | 828,440,000      |
| 1873  | 1,077,920,000 | 214,687,000 | 863,233,000      |
| 1874  | 1,120,525,000 | 220,599,000 | 899,926,000      |
| 1875  | 1,088,890,000 | 215,490,000 | 873,400,000      |
| 1876  | 1,131,056,000 | 232,150,000 | 898,906,000      |

In the testing of Iron and Steel during which any state of (pull) stress (exceeding the original elastic limit) exists affects the result in two somewhat antagonistic ways. It augments extension, by giving the metal leisure to flow. This may be called the viscous effect. But, on the other hand, it reduces the amount of extension which subsequent greater loads will cause, and it increases the amount of load required for rupture in the way which has just been described. This may be called the hardening effect. If the viscous effect existed alone, or if the hardening effect were small, the material would show to greater advantage as regards elongation, and to less advantage as regards ultimate strength, the more slowly the load were applied.

---



## THE "BAR-LOCK."

(402.) The Bar-Lock is one of the American writing machines that has pushed itself into favor because of its automatic actions and other features of pronounced practicability. The name "Bar-Lock" is taken from a device at the printing point designed to lock the type-bars at the moment of imprint, which, together with the adjustable ball and socket mechanism of the type-bar hanger, insures proper alignment of the letters.

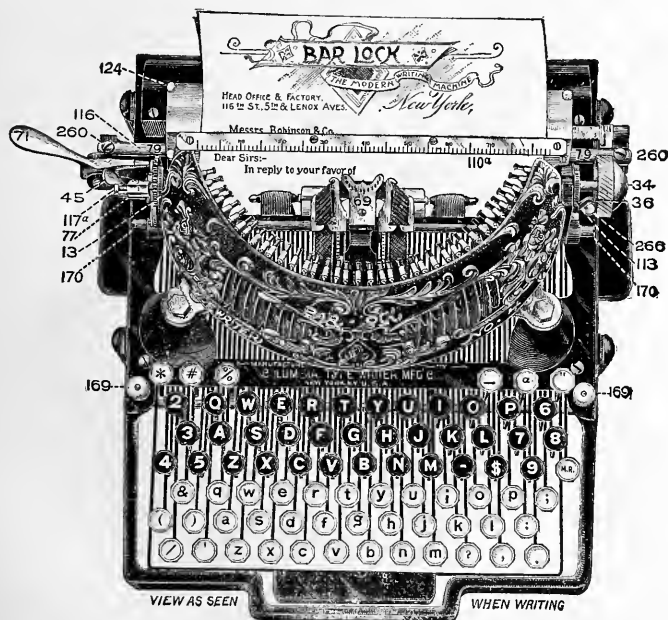


FIG. 1.

(403.) The Bar-Lock was the pioneer of writing in sight (see illustration). This feature is secured by arranging the type-bars in a double row on a semi-circle in front of the paper carriage, so that they will strike on top of the platen. This allows of the usual simple method of inserting the paper, which is not rolled up in a cage after the line has been written, but is held out straight by support arms; therefore, once a letter is printed, it remains always in sight.

(404.) The ink ribbon movement contributes to writing every letter in sight, as it carries the ribbon over the printing point upon depression of the key, and immediately makes its retreat, exposing to full view the letter just imprinted upon the paper.

(405.) The downward blow of the type-bar renders the machine a very powerful manfolder, and also makes the action of the keys very light and easy, combined with a short depression. The short swing of the type-bars and the quick escapement of the carriage contribute to speedy action, and the machine is ever responsive to the most skillful operation.

(406.) The keyboard is in duplicate, having two manuals of identical arrangement, one, the upper or black-colored keys, for capitals, and the lower or white keys for the lower-case letters. The order of characters is that of the universal keyboard (see cut. In all essential respects the all-finger procedure, as described in the foregoing pages, will apply readily to the Bar-Lock, and it would be exceedingly unwise to manipulate the machine without method or carelessly. The inquirer should peruse pages 7 to 9 inclusive, and the exercises of pages 75 to 78 will be found excellent for acquiring a command of the keyboard.

(407.) The proper position of the operator is a matter very often overlooked. If reasonable attention were paid to this point there would be a larger number of rapid and accurate operators. To write with accuracy and with ease, the keyboard should be two inches below the level of the elbow and the machine should be drawn forward so that the keyboard projects six inches over the edge of the table.

(408.) This machine is constructed with a view to relieve the operator of all mental and physical strain possible. There is no need to give the old staccato blow on the keys from the elbow; all that is necessary is a light, quick tap with the finger; keep the arm still and operate with the fingers in just the same manner as a five-finger exercise is performed upon the piano.

(409.) Practice will give the operator the exact force of blow required to obtain a clear imprint upon the paper; anything more is wasted effort and a detriment to the machine.

(410.) Depress the space-bar with the thumb, preferably the right. Employ the right fourth finger upon the interrogation, underscore, period and outside of that limit; and the left fourth finger upon Q, A, Z, etc. The figures at the extremes of the manual are also attacked by the little fingers. This instruction applies to ordinary writing, where the proportion of figures is not great, and the labor of the weaker fingers would, therefore, be not excessive; but in tabular work the recommendation would be to write numbers with the stronger fingers, inasmuch as no effort for "touch" writing would be warranted.

(411.) The general application of the other fingers is shown by the diagram of paragraph 354, and the text descriptive of the same may be profitably studied, as well as the introductory parts of the several machine-exhibits. Read also paragraphs 307 and 309 and practice 308. Paragraph 312 also directs to good procedure.

(412.) First adjust the margin guide on the scale bar by sliding it to any desired position at the right-hand end of the scale. Take the paper in the left hand, the top edge downwards and the side to be written on facing away from the operator ; slide the paper down the paper table 124, Fig. 1, until it rests against the platen, then, with the right hand, rotate the bell 34, Fig. 1 ; while so doing, lift up the paper scale 118, Fig. 3, with the left hand, allowing the scale to drop down upon the paper directly the top edge of the paper has passed over the top of the printing platen. While inserting the paper allow it to rest against the platen, it will then feed forward perfectly straight ; if pushed against the platen it may enter crookedly, in which case it should be pulled to either side by the bottom edge, until the upper left-hand corner is parallel with the side of the sheet. After a little practice, the paper can be brought into position for writing on by passing the palm of the right hand across the milled edge of the bell ; this is a very rapid operation.

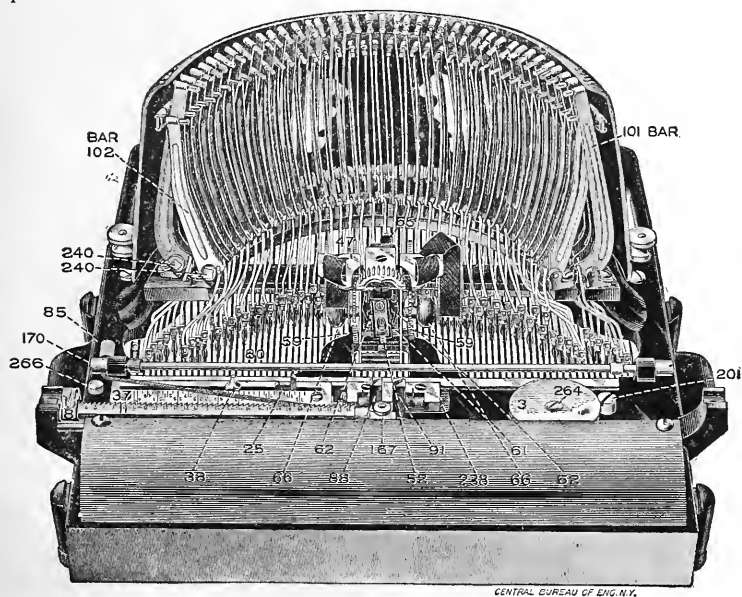


FIG. 2.

(413.) A rapid method of inserting envelopes or postal cards is to lift the scale with the little finger of the left hand and with the thumb and first finger insert the envelope at the top of the platen under the feed rolls 136, Fig. 3, rotating the bell toward the front of the machine with the right hand.

(414.) An advantage of this machine is that if it is desired to address an envelope or write a telegram on another sheet of paper while a sheet partially written is in the

carriage, there is no need to remove the partially written sheet ; all that is necessary is to insert the envelope or telegram on the top (see p. 413), write what is required, remove the sheet and turn back to the line where the first sheet was left off and go on writing ; the paper feed is accurate and the paper will not have shifted its position.

(415.) Under the paper table 124, Fig. 1, are two arms, 133, Fig. 3; by pulling these out to form a triangle, the sheet of paper written upon is supported so that the writing remains in sight from the first line written.

(416.) To obtain clear, sharp writing, it is necessary to have a moderately soft and smooth platen. To protect the platen and prevent it becoming dented, use a sheet of hard, thick paper at the back of the sheet to be written upon. After the paper has been inserted in the carriage, note the number on the scale 118, Fig. 3, where you desire the writing to commence, then find the same number on the margin rack, 11, Fig. 2, and slide the margin stop, 18, along the bar until its left edge registers at the number wanted. This scale is graduated at every alternate tooth, but the margin stop may be set opposite any tooth of the rack.

(417.) The margin stop may be released from mesh with the teeth of the bar on which it slides, by pressing together its two little handles, thus readily permitting of its being brought to the right of the machine. Should the operator desire to write notes, Q. and A., annotations, etc., within the margin, he can do so by pushing the carriage to the right with the left hand, while depressing the key marked M. R. (meaning Margin Release) with the right hand. This operation rocks the margin rack, 11, Fig. 2, out of the path of the carriage, although retaining its adjustment, and allows the desired note, annotation, etc., to be written. One letter before the original margin adjusted for is reached, the key marked M. R. will rise, thus warning the operator to commence a new line if his marginal note is not complete. Thereafter, the original margin will have automatically recovered.

(418.) To receive warning when the written line is about to be completed, note the number on the carriage scale, 118, Fig. 3, where you wish the bell to ring (usually five letters before the end of the line), then move the bell-trip slide, 38, Fig. 2, to the same number on the bell scale, 37, Fig. 2. The bell will then ring when the writing appears at that number and enable the operator to determine whether to finish the word before the end of the line, or write a hyphen and complete it on the next line.

(419.) The keyboard locking stud, 25, Fig. 2, can be set to give a second bell alarm at any point after the first ringing, and is adjusted in the same way as the bell-trip slide, provided the thumb-screw, 266, Fig. 2, is first screwed down as far as it will go, *care being taken that the bell-trip, 38, Fig. 3, is not in contact with the stud, 25, Fig. 2, while the screw, 266, Fig. 2, is being tightened.* The stud, 25, is readily moved to any point of the bell scale, by placing the finger on its milled portion, and, while bearing down on it, sliding it along. These devices can be set to ring five or more letters or words apart, as desired, being limited only by the length of the bell scale.

(420.) If the screw, 266, is loosened as far as it will go, the stud will act to lock the keyboard at any point of the writing for which it may have been set, and this setting is made in the same way as for a second bell alarm. When adjustments are made for one bell ringing and the keyboard lock, *care should be exercised in setting the bell-trip slide, 38, first and the locking stud, 25, afterwards. If both 38 and 25 are pushed along together the keyboard will be locked until the bell-trip slide 38 is moved to the right.* When it is desired to have the keyboard lock at five letters after the bell alarm, the stud, 25, should be moved close up to the bell-trip slide, 38. The office of this keyboard lock is to guard against printing one letter upon another at the end of a line, when the bell warning has not been heeded. When it is desired to write one or more letters or words after the keyboard has thus become locked, the release lever, 45, Fig. 3, on the left of the carriage, should be pushed to the right of the machine with the forefinger of the left hand, thus allowing the carriage to pass the lock until the bell rings, and then the carriage can be returned to the point opposite the indicator, 69, Fig. 1, where the letters or words are to be added, and the writing continued.

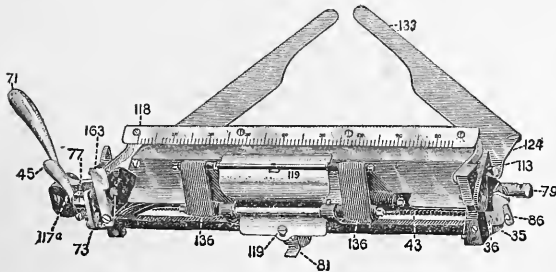


FIG. 3.



FIG. 4.

(421.) When the line of writing is completed, the line space-lever, 71, Fig. 1, on the left of the carriage, is pushed to the right with the tips of the fingers of the left hand, until the carriage stops against the margin block. In thus returning the carriage, the paper feeds automatically one, two or three spaces, as determined by the setting of the gauge, 77, Fig. 1. If one, two or three-line spaces are wanted, this gauge is turned between the thumb and forefinger until 1, 2 or 3 is uppermost. When it is desired to bring the carriage to the right, without spacing for a new line, simply pull the bell until the proper point opposite the indicator is reached.

(422.) When it is desired to release the carriage from the control of the escapement to bring the carriage quickly to the left, push the lever, 45, Fig. 1, to the right, with the forefinger of the left hand. The carriage will then follow the finger freely to the left, and when the spot is reached where it is desired the carriage should stop, place another finger of the left hand against the lower portion of the line space-lever and it will stop there.

(423.) The platen, in this machine, may be turned backward by means of the bell, 34, Fig. 1, without any other operation, inasmuch as the line-space pawl is normally out of mesh with the ratchet, 116, Fig. 4. The platen can be freed from restraint of its detent, to allow the flimsy paper being drawn without tearing or creasing, by slightly pressing on the gauge, 77, Fig. 1, while withdrawing the paper.

(424.) The paper feed on the Bar-Lock is accurate, either with single or manifold sheets. When a sheet has been fully written, it can be turned back and any of the preceding lines written over without in any way blurring the writing. This perfection is obtained by the use of rubber driving bands, and the arrangement of the same, so that the sheet of paper written upon is held by the driving bands for one-half of the circumference of the printing platen. The paper is held rigidly until within one-half inch of the bottom, and then the sheet is automatically discharged from the carriage. The rollers on which the driving bands revolve are of anti-friction composition and do not require oiling.

(425.) Remove the platen, slip off the bands, 136, Fig. 3, put the new band on the large under roller first, and hold it there with the forefinger of the left hand while slipping the band onto the two front rollers; after the bands are in position replace the platen. See (431) for instructions how to remove platen.

(426.) To write on ruled lines in insurance, accountants' and other documents, filling in dates, etc., push in the stud 117a on the gauge 77, Fig. 1, with the forefinger of the left hand. This operation releases the platen from the control of the ratchet detent and enables the operator to bring the ruled line to be written on immediately opposite the edge of the steel plate under the ink ribbon, insuring an accurate registry of the writing on the line. When it is desired to restore the platen under control of its detent, the gauge, 77, Fig. 1, is touched lightly with the forefinger of the left hand.

(427.) The foregoing device enables the operator, likewise, to re-insert a written sheet, and correct it, or add to the writing at any point. Pull the paper on either side until the pointer in the center of the lock-plate, 69, Fig. 1, points to center of the *i* and the bottom of the letters are level with the steel plate under the ink ribbon. It also allows of fractions being made in proper form, thus:  $\frac{3}{4}$  or  $\frac{3}{8}$ . The first fraction is made by writing the upper figure and the underscore, then turning the platen until the proper separation is reached and printing the lower figure. All three characters must be printed with one hand while the space key is held depressed with the other hand. The second fraction is made by writing the upper figure and diagonal line, then turning the platen until the proper separation is reached and writing the lower figure.

(428.) Columns of figures are written one underneath another by a clever manipulation of the carriage and pointer; the constant visibility of the writing makes columning

a comparatively easy matter. When a column of one character is required, fasten down the spacer (with a weight), use one hand for writing, and the other for line spacing. This operation may be repeated for more columns of a like character.

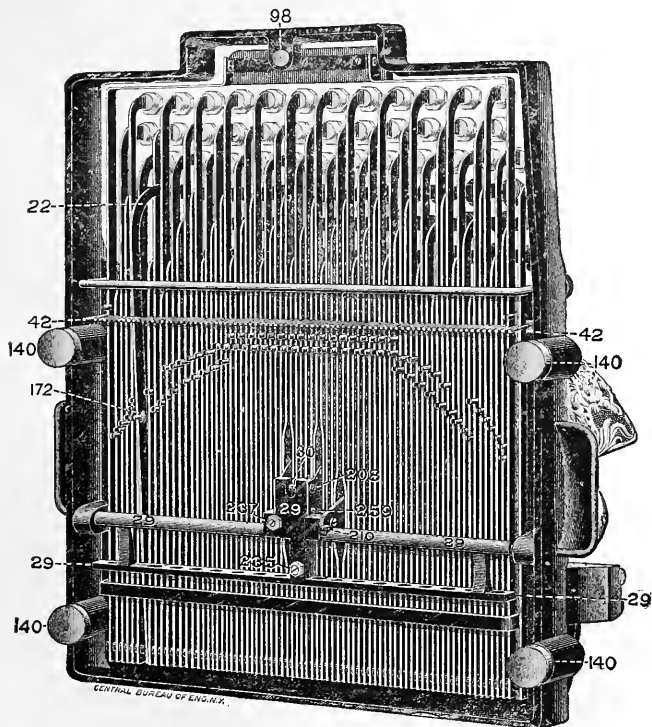


FIG. 5.

(429.) The ribbons for the Bar-Lock are wound upon spools which fit the machine, and these spools are instantly detachable when the supply of ink needs replenishing. No attention need be paid to the ribbon after it has once been adjusted, as the reverse motion is secured by a device giving automatic action. Detailed directions for applying the spools can be found in the Book of Instructions accompanying the typewriter. Suffice it to say that the operation takes longer to describe than to perform. When fully understood a new ribbon can be substituted for an old one in half a minute. Always take off the full spool first, and exercise care that the spool is inserted so that the latch is on the outside, and the ribbon reels off from the top.

(430.) When manifolding follow the usual method, but do not strike too hard on the keys, and remember that no alteration of the paper feed is required, whether for one or thirty sheets.

(431.) To remove the platen, 110a, Fig. 1, from the carriage, first raise the scale, 118, and let it stand upright. Place the right thumb against the bell, 34, and left thumb against the ratchet, 116, Fig. 1, pull the latches, 113, Fig. 1, toward the front of the machine, and with the thumbs push the platen toward the back of the machine. To replace the platen or substitute another, put the platen on the carriage in place to be caught by the latches, 113, *carefully seeing that the bell hammer, 36, is placed within the bell*, and then push the platen toward the front of the machine. The latches will automatically latch the platen in place, then let down the scale bar. Platens are furnished in three grades, hard, medium hard and soft. Hard platens must be used for manifolding, medium hard for general work and manifolding two or three copies, and soft platens should be used for writing on single sheets only. The platens for this machine are accurately interchangeable.



SIDE VIEW OF NO 4 BAR-LOCK

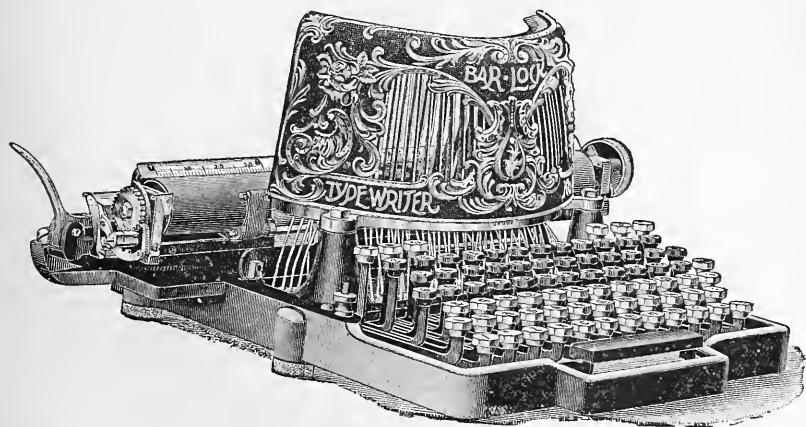
(432.) The type should be kept clean by brushing them with the brush furnished with the machine, rubbing the type with an up and down movement, not sideways. If a letter is clogged with ink do not pick it out with a pin, but lay the brush on the lock-plate, 69, Fig. 1, with the bristles upwards, and depress the key several times ; this will clean the letter.

(433.) The machine should be carefully dusted every day and the parts kept nice and bright. The rod on which the carriage runs should be wiped dry with a clean piece of cloth, and then oiled by touching the rod on several places with the Bar-Lock oiler,

after which the carriage should be run backward and forward a few times to properly distribute the oil.

(434.) Once a month put a drop of oil on the bearing of the truck wheel behind hook 81, Fig. 3. This wheel must revolve freely or the paper carriage will be sluggish on its movements. Remove the printing platen, 110a, Fig. 1, move the carriage until the spacing dogs, 88 and 52, Fig. 2, can be seen between the opening on the carriage frame, put one drop of oil upon the face of each. Before replacing the platen put a drop of oil on the bearings for the platen.

(435.) The round wheel or barrel, 3, Fig. 2, contains the spring that supplies the motive power for the carriage. On the left of the spring barrel, 3, is the tensioning screw, 201, Fig. 2. When it is desired to increase the tension of the spring give the screw, 201, a turn or so to the right, and when there is too much tension give the screw a turn or so to the left.



SIDE VIEW OF NO. 5 BAR-LOCK.

(436.) To remove the carriage bring it to the right as far as it will go; disengage the knob, 85, Fig. 2, from its seat, 86, Fig. 3, on the carriage, and hook it under the nut, 170, as shown in Fig. 2; then draw out the screws, 260, Fig. 1, at each end of the rod, 79, move the carriage over to the extreme right, remove the platen and carefully lift out the carriage. To replace the carriage simply reverse these operations, observing that the hook, 81, Fig. 3, on the front of the carriage goes *underneath* the rod, 80, Fig. 2.

(437.) The tension of the keys can be adjusted by means of the thumbscrew, 167, Fig. 2, at the rear of the carriage, by turning it to the right for more, and to the left for less, tension. By this means the machine can be made to turn as lightly or as hard as may be desired.

(438.) The type-bars should play smoothly between the pins of the lock-plate, 69, and neither side touch more than the other. When a type-bar has become loose at the joint from long service, the wear may be compensated for by slightly turning to the right the adjusting screw, 240, Fig. 2, on the particular type-bar bracket, with the flat wrench accompanying the machine.

(439.) There are two styles of Bar-Lock—the No. 4, which accommodates paper nine inches wide and writes a line eight inches long, and the No. 5, which admits paper sixteen inches wide and writes a line fifteen and a half inches long.



OPERATOR SITTING IN CORRECT POSITION FOR RAPID WRITING.

(440.) The Bar-Lock Modern Copyholder will be found very useful and practical. From the illustration it will be seen that the copy is directly in front of the operator, yet not hiding the view of the writing. The line guide moves automatically by means of a dog and rack movement, from line to line of the copy. The distance of the movement can be regulated to suit the width of line upon the copy.

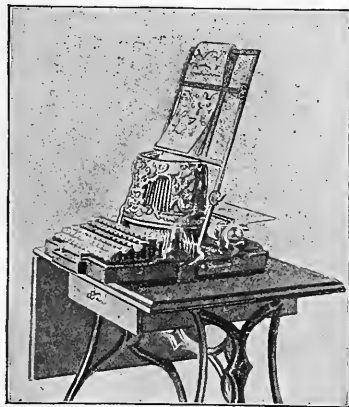
(441.) By means of a very clever but exceedingly simple attachment, the Bar-Lock paper carriage will jump upon the depression of the margin key any desired distance; this reduces the time and labor of columning by one-half as compared with the old manner of writing columns of figures.

(442.) By inserting under the paper scale bar a small piece of red carbon paper, any word or words it is desired to emphasize can be illuminated in color. The carbon paper being below the ink ribbon, the impression upon the paper is given from the carbon paper and not from the ribbon. After the requisite words have been written, the carbon paper is removed and the writing proceeded with in the usual manner. This is done without loss of time.

(443.) The ability to feed paper into the paper carriage from the top of the platen enables a correction to be made upon a sheet of paper though it may be affixed at the top to several other sheets; this is often an advantage in a lawyer's office.

(444.) All adjustments of the machine are permanent, and must not be disturbed except for serious reason. Special directions concerning the correction of disorders that rarely occur may be found in the machine manual above mentioned. Keep the typewriter clean and properly oiled; have a wise conception of the bearing of every part; use it well, and the reward will be handsome writing, and a long period of usefulness.

(445.) To pack the machine for transport screw the nuts, 169, Fig. 1, so that the ends of the U-shaped rod on which they are screwed come up through the tops of the nuts. This raises the rod and locks the keyboard. Then give the nut, 170, Fig. 1, two turns to the left, push the hooks into the holes at each end of the carriage as far as they will go, and tighten the nut again to prevent the hooks from vibrating away from the carriage.



BAR-LOCK COPY HOLDER.



The above is a reproduction of a prize design picture of the "Santa Maria," executed entirely on the Bar-Lock, without the help of pen or pencil, by Miss F. Stacy.—Reprinted from the "Phonographic World."

### Speed of Typewriting machines.

The matter of speed in a typewriting machine is a subject of the most interesting character, and one where much exaggeration can be indulged in among interested parties, to the delusion of the purchaser.

Speed obtained by one individual in writing the same word of two or more letters over and over, or repeating a sentence containing short words, is one thing, and speed obtained by the ordinary operator in practical use is another, and the difference is very marked.

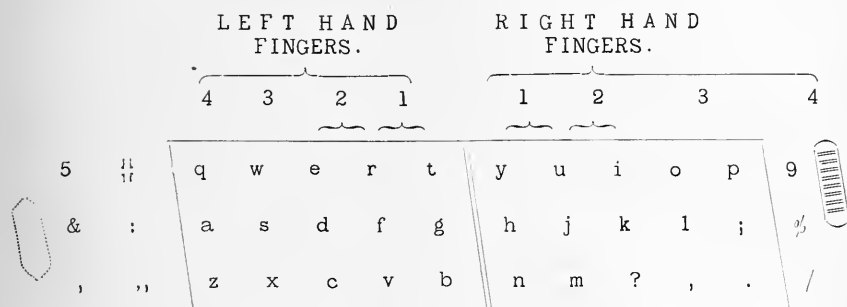
To find the amount of work an operator can do, he should copy new matter for perhaps a quarter of an hour at an ordinary rate of working, and the number of lines or folios written, will be a safe estimate of the capabilities of the instrument and operator combined. The great mistake into which purchasers are often led, is caused by the "one minute standard" of speed ordinarily adopted.

Manufacturers have shown the wonders of a minute, and the impression has remained in the listener's mind, that the rate was continuous.



## THE CALIGRAPH.

The Caligraph principally mentioned in this exhibit is the No. 3 Special with the "universal keyboard," and below is a diagram showing the lower-case portion of that arrangement of letters.



D I A G R A M -- of -- LOWER MANUAL.

(447.) The above manual is supposedly divided into right and left hand territory by a line tending between the letters TGB and YHN. The figures at the top indicate that all the fingers are to be used, and the slanting rows of letters beneath give an indication of the duty of each finger.

(448.) The letters upon each side of the imaginary division are the special province of the index fingers, and may serve as guide-keys. By dropping the index fingers\* upon T and Y, and then shifting to R and U, allowing the other fingers to fall naturally upon the keys beneath them, the scope of the method will be revealed, and hand position established. Because there are more keys in each bank than there are fingers, advantage is taken of the superior dexterity of the first and second fingers to make it obligatory for them to do double duty.

\* Blind operators upon a more compact keyboard get their bearings by dropping the fourth finger upon P and Q, and working inward toward T and Y. A finger motion or writing by touch cannot be accomplished upon a keyboard that is too compact. For example, the piano is operated entirely by touch; from the center of one key to center of next is 1 inch, on the Caligraph No. 2 from center of one key to next is seven-eighth of inch, on No. 3 a trifle less. Now, if you will measure from center of one finger to next, when in position for operating, you will discover that they will be about the same distance apart as keys, and if keyboard is too compact as well as not comparatively level, it will require a hand motion to strike the next key, and we

(449.) By this plan, which is entirely practical, the index fingers have optionally two rows of letters to manipulate, namely, YHN or UJM for the right hand, and TGB or RFV for the left. But this imposes no hardship, as the first fingers are strong and capable of stretching wider intervals than are the others. The second fingers likewise have the option of striking UJM or IK ? with the right hand, and RFV or EDC with the left, as shown by the diagram.

(450.) The circumstances governing such optional finger action are: when the index fingers fall first upon T, G or B or Y, H or N, at the beginning of a word, the next outside letters receive the next finger; when UJM or RFV begin words they generally take the index fingers. This is neither complicated in theory nor in practice. The remaining fingers operate according to the directions of the diagram, namely, EDC and IK ?—second fingers; WSX and OL,—third; QAZ—fourth of the left hand; and P;—third of the right hand. The fourth finger of the right hand may be reserved for a use to be explained in the next paragraph.

(451.) The space-bars of the Caligraph are two in number and located at the sides of the keyboard. Both space-keys should be employed, as it serves to time the operation of the machine in an even manner, and by using the fourth finger the hand should not be removed from the keyboard, a turn of the wrist sideways being all that is necessary. This is the advantage of side space-keys, a front space-key requiring an awkward turn of the hand when spacing is done with the thumb, taking the hand from the proper writing position; and if spaced with the first finger, a whole arm motion is required, taking the hand entirely from the keyboard and being much slower than the hand motion required by a side space-key. Such use of the right fourth finger takes it from the keyboard, and makes the finger procedure of the right division of the manual differ slightly from that of the left; but the difference relates mainly to the letter P, which, being of low average recurrence, cuts no great figure in writing.

(452.) The capital letters assembled in the upper banks are manipulated in like manner to the lower case, while the figures and other characters are attacked by the fingers most convenient to use.

(453.) For accustoming all the fingers to the respective keys, as well as to train the right and left little fingers to space-bar duty, may be practiced, only being careful to remember that upon the Caligraph letter P is attacked by the third finger and the spacer with the fourth. The object also is to promote an acquaintance with the letter relations of the manual, which should be memorized, and to teach the proper style of finger action, called *touch*.

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think that it is easier to locate keys by a finger motion alone than by hand and finger motion. For speed a keyboard should be separated, as in rapid motion the hand is apt to travel farther than when writing slow. A man will take longer steps when running than when walking, and with greater ease, and if he were obliged to take the short steps, he would soon stumble. This is equally true in motion of the hand, and explains why we so often see letters piled up by machine with compact keyboards, as in rapid work they get to stumbling, and the machine will not respond to the uneven motion.

(454.) Practice these letter combinations after the fashion of five-finger exercises in piano playing, until the keyboard is memorized and the touch is satisfactory. Write no capitals yet.

(455.) Good touch is important. As a matter of style on the part of the operator it is particularly so, and as a means to evenness of impression it is essential. Strike the keys with "staccato" movement, yet forcibly enough to secure a legible imprint. Release the key quickly (as though it were hot), so that the next type will have a chance to rise to the paper without conflict with its neighbor. For the same reason never strike two keys at once. There will be no difficulty in making the first and second fingers do this, but the third and fourth will need training a little. Discipline the whole hand so that the fingers will operate uniformly, and the result will be an even impression.

(456.) Write slowly at first, speed being of secondary consideration to accuracy. The latter must be cultivated, but speed will develop of itself. By careful attention to method, accuracy will be assured.

(457.) The operator is now and always earnestly admonished to care for his machine. Dust and clean often. Keep the wearing parts bright, the bearings slightly oiled; but apply oil sparingly, and wipe off all outside and superfluous oil after running the machine a little. Do not allow the types to fill.

Do not move the paper after writing has begun. Start it straight, and then let the regular feed control its movements. Do not disturb it by erasing. When restoring the paper after removal for any reason, adjust the longest line to the scale, making the graduations coincide with the vertical (and thin) letters *i t j l f*, then turn the platen one cog, and writing may begin.

#### (458.) EXERCISES AND SENTENCES.

The remarks in this LESSON with reference to Capitals apply particularly to machines having a SHIFT-KEY beneath the left little finger. Such remarks may be ignored by the Caligraph student, because they do not apply to a typewriter having all its letters, both Capital and Lower Case, displayed upon the keyboard. The upper manual being identical with the lower in respect to the order of the letters, it will only be necessary to lift the hands to the Capital letters when a Capital is required, and attack each letter with its appropriate finger, according to the diagram upon the first page of this exhibit.

(459.) Remember that P demands the third finger. Take particular note that hand position is one of the essential features of this system of fingering. Hand position is first obtained by correct action of the index fingers, and maintained by strict adherence to the fingering of words as given. When writing, hold both hands over the keys, alert for duty; not drop a hand in the lap, if it happens to be idle a moment.

(460.) Do not crowd the paper ; let it feed easily. Listen to the bell, and understand its warning. Never let the ribbon run entirely out.

(461.) Avoid the habit of lifting the carriage often. Cultivate an exact finger method from the beginning, and exactness will beget confidence in its results. With few or no errors there will be little erasing, and that is a forward step. Fill up each line, planning to have the right margin as even as possible. Be careful to divide syllables properly by the hyphen ; above all do not separate them when a single letter will remain at the end of the line, or at the beginning of the next, like a-gain, might-y, a-part, etc.

(462.) EXERCISE FOR THE RIGHT THIRD FINGER AND SPACER (4th finger).

pro- per- pre- putty pomp plum plump pulp pump perceive pure  
poet pile pike pretend post limp jump pick hop trip hump asp equip  
up phaeton phalanx phase paraphonic pillory peri- pink pious pipkin poly  
pneumatic poison polar polka pound pulse pyloric part\* upon\*

(463.) FOR PRACTICE, WHEN LONG WORDS CAN BE WRITTEN READILY.

A practical professional painter purchases his purest procurable pigments, perhaps, to prevent personal painstaking, preferring previously prepared paints. The particular and penetrating public praise Pierce's Prepared and Paste Paints, probably preferring permanency to parvitude of price. Property possessors preserve proper proportions in painting either palace pretentious or poor people's premises, by perusing pointers printed in Pierce's paint pamphlets. Promenading Portland's pavements purposely pure paint perusing, public preference positively points to Pierce's Prepared Paints.

The following models of business letters are given for copying practice :

UNITED STATES OF AMERICA.

|            |   |                                     |
|------------|---|-------------------------------------|
| .....      |   | Supreme Judicial Court,             |
| PEOPLE     | : | Appeal in Equity. March Term, 1894. |
| vs.        | : |                                     |
| CALIGRAPH. | : | Respondent being duly sworn         |
| .....      | : | testified as follows :              |

Counsel for Appellant. Will you state briefly where the first Caligraph was made ?

A. In New York, in a small shop on West Thirty-first street. In 1882 the American Writing Machine Company, which is the company that manufactures the machine, took larger quarters at Corry, Pa. The present commodious quarters at Hartford, Conn., have been occupied since 1884.

The Court. Are we to understand that the machine upon the table before you is an example of the typewriter in question ?

---

\*The only words containing P in the list of 120 said to comprise one-half of ordinary writing.

Counsel. It is, your Honor.

- Q. Has this typewriter characteristics which distinguish it very much from others; that is, to the casual observer? A. Not particularly, yet the application of the mechanical ideas involved is worthy of notice, and the results achieved entitle the machine to favorable consideration.
- Q. What class of levers is used to operate the Caligraph? A. The original typewriter key action was that of the lever of the "Second class" so called, the power (letter key) and fulcrum (bearings) being at the extreme of the bar, and the weight (the type) being between; while in the Caligraph the conditions are changed, the power being applied between the fulcrum and the weight (third class lever) with the result that the action of the type bars is quicker.
- Q. Will you state clearly why the letters of the keyboard are arranged in so eccentric a manner? A. The first typewriter keyboard was arranged to favor some mechanical obstacles, as well as to give certain letters of more frequent occurrence treatment by the stronger fingers. However, with the caligraph any order of letters can obtain, so far as the mechanism of the machine is concerned. The regular keyboard is as follows:

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
|   |   |   | q |   | z |   |   |
| w | t | r | e | y | u | i | o |
|   | a | s | d | f | g | h | k |
| j | x | v | b | n | l | m | p |

This is the order of the small letters; the capitals were ranged outside of these, their location having a definite relation to the lower case, with four exceptions, the same finger being employed for capitals as for small letters. This is the style of keyboard most Caligraphs have to-day, though the "universal" keyboard will be furnished when desired by those who follow a method of fingering which depends for its success upon a relation of position between capitals and lower-case.

- Q. Cannot a 4-finger method be employed on the original Caligraph? A. Most assuredly, and it is much to be recommended; only the varying position of the upper-case letters (capitals) tends to complicate the all-finger method of "Practical Typewriting."
- Q. Have any other arrangements of letters been suggested? A. A great many; the aim being to impose the most work upon the strong fingers, the work being gauged by the average recurrence of the letters in writing.
- Q. What has been found to be the comparative frequency of the letters in ordinary composition? A. According to Brewer's Dictionary of Phrase and Fable the comparative recurrence is as follows, on basis of 1,000 E's.

|          |         |         |         |         |
|----------|---------|---------|---------|---------|
| E, 1,000 | T, —770 | A, —728 | I, —704 | S, —680 |
| O, —672  | N, —670 | H, —540 | R, —528 | D, —392 |
| L, —360  | U, —296 | C, —280 | M, —272 | F, —236 |
| W, —190  | Y, —184 | G, —168 | P, —168 | B, —158 |
| V, —120  | K, —88  | T, —55  | Q, —50  | X, —46  |
|          |         | Z, —22  |         |         |

From the above it is easy to compute the comparative labor of the fingers according to any style of keyboard. At the same time it is obvious that the establishment and maintenance of one order of letters, even upon different machines, is conducive of advantage to all operators.

- Q. May I ask what moves the carriage? A. A large spiral spring beneath the machine, entirely out of sight. This controls the driving arm at the back, which attaches to the carriage. The power of this spring is extended, continually forcing the carriage to the left. The depression of a key disengages the dog in the escapement, allowing the spring to move the loose rack forward, but the dog engaging the notch in the fixed rack prevents the carriage moving further. On removing the finger the dog returns to loose rack and the carriage moves forward. This tension is increased or diminished by turning the spring at its front end below the machine.
- Q. Isn't there a key tension also? A. Yes, the keys present a certain resistance, governed somewhat by the weight of the type-bar (trifling) to be lifted, and by the engagement of the toothed rack with the "dog" at the back. However, the dog-spring primarily regulates the tension of the keys, and this can be adjusted by turning its screw to the right or left. The Caligraph leaves the factory with its tensions all right.
- Q. What is the handle for at the front of the carriage? A. The line-spacer lever. It is used to throw the platen over, thereby feeding the paper for a new line. The carriage should be lifted by the left hand; the motion is shorter, hence quicker, and leaves the right hand free for any duty that may be required and prevents the careless operator from turning the paper when he wants only to see the work.
- Q. It is hardly necessary at this stage of the inquiry to ask where the paper is inserted. A. The paper is fed just back of the platen, laying it upon the metallic paper-table and rolling it into the carriage with the fingers. It passes between two rubber rollers, snugly held together by springs called the paper-feed springs. These latter are regulated by the screws seen at the upper ends of the spring at either side of the paper-table.

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NOTE.—The following comparison of letters is based on a count of matter containing 159,500 letters:

|           |         |         |         |         |
|-----------|---------|---------|---------|---------|
| E, —1,000 | T, —770 | O, —610 | A, —608 | N, —555 |
| I, —554   | H, —524 | S, —514 | R, —484 | L, —529 |
| D, —326   | U, —219 | C, —205 | M, —198 | F, —185 |
| W, —163   | G, —151 | P, —145 | Y, —145 | B, —128 |
| V, —75    | K, —47  | X, —13  | J, —11  | Q, —8   |
|           |         | Z, —4   |         |         |

This second list was handed to us by the persons who made the count, and was prepared with great care. It is interesting for this reason alone.

- Q. What are other features of the carriage? A. The toothed rack at the back, which has been alluded to, and which deserves careful study. The pointer, which marks upon the frame scale in front the progress of writing, corresponding in its registration to the platen scale observed by lifting the carriage. These scales are useful in making corrections; in fact, to insert an omitted letter, turn the paper so that the written line is close to the scale, and all its vertical letters (like i l j t) coincide with the scale graduations; then revolve the platen one notch, move the pointer to the place for the missing letter as shown on the front scale, and then print.
- Q. But how is the printing accomplished? A. Each tap of a key throws a type face against the platen, and at the same time moves the carriage so as to give place for a consecutive character. The force used to depress the key should be short and sharp, yet great enough to cause the type to strike the ribbon with a staccato movement; the force used should be uniform. The keys are easily depressed and respond uniformly to the touch of the operator. Touch varies with different operators. A more rapid operator does not mind using a machine that needs a slightly greater force to make the imprint. The force of impact is termed the Touch, and its quality oftentimes distinguishes good typewriting from poor.
- Q. Well, what really makes the imprint? A. The impression is accomplished by the intervention of a ribbon saturated with a coloring pigment. This ribbon stretches across the type basket, proceeding from a spool at the right to one at the left, or vice versa. This action is automatic until a spool is filled, when the motion has to be reversed by a rod which in the No. 3 Caligraph is just behind the left spool. In the earlier machines it is at the top front of the frame. Besides passing back and forth the ribbon has a slightly lateral motion, and so is exhausted of its ink in an economical manner. When the ribbon is entirely unwound from a spool the experienced operator will detect it by a difference in the action; but the beginner should be on his guard, as the ribbon will eventually stop, and the types will pound a hole through it.
- Q. What is the bell for at the front? A. To warn the operator that the end of the line is near, and to remind him of the division of a word by the hyphen. If the bell is disregarded the impressions will pile one upon another, and make an ugly smutch. The bell can be set to ring at any desired distance before the end, and for general writing should be set five spaces before the end, which gives ample opportunity for word arrangement. It can also be set to help out on the margins.
- Q. Yes, how about the margins? A. Well, to be able to stop writing at the desired point, say at the right, the margin-stop on the front rail should be readjusted to collide with the upright buffer at the end of the rail so that the pointer will mark the place ending. The other margin is fixed by setting the bell-trip so that it will give the necessary warning, and the line can be ended upon that audible hint.

- Q. What is the best way to take the paper from the machine? A. To withdraw the paper, or to reverse the motion of the platen roller for any reason, turn the rubber paper-feed wheel at the left end of the platen, and the paper will roll back easily.
- Q. By the way, how is the Caligraph for manifolding, and what kind of a Mimeograph stencil will it make? A. It is first-class for either purpose. It is so strongly built that it will stand the hard action required for manifolding, and its deeply-cut type produce excellent Mimeograph work.
- Q. Does the insertion of many sheets impair the alignment; and if so, how is it remedied? A. If a very large number of sheets of paper is inserted, the diameter of the roller is necessarily increased sufficiently to throw those types whose bars are fastened to the front half of the circle too high in line of writing and those on the rear half of the circle too low. The most convenient method of overcoming this is to loosen the screws at either end of the front track, upon which the front wheel of the carriage travels, and by raising slightly the pillars that support the track, place underneath a thin washer of paper, card-board or metal, taking care that equal thicknesses are placed under each pillar, then turn down the screws. This elevates the front track, and correspondingly the carriage, sufficient to allow the type to come in contact with the roller or platen at the same point as before, when the diameter of the roller was less.
- Q. Does the machine ever need oiling, and what is the best way? A. The machine should be oiled regularly every alternate morning, and upon the guide rails solely. Two drops on each end of the rails about three inches from the end, the carriage run back and forth over the rails two or three times or more, distributing the oil the full length of the rails and leaving any dirt at the end of the rails, where it can readily be wiped off with a cloth. Oil should never be placed on any other part of the machine.
- Q. Is the alignment permanent? A. Yes, or nearly so; if it is disturbed it can be corrected by tightening the adjusting screw which passes from side to side of the hanger between the jaws of which the type bar works or plays, tightening as long as the bar will fall to its natural position when in rest, the space key, in the meantime, being depressed.
- Q. Is a backing sheet ever necessary upon the platen? A. No.
- Q. What do you consider the best writing machine on the market? A. Pardon me if I decline to answer that question. It may be a matter of opinion, and it may not. Some of us have pronounced views, yet it may not be wise to express them. It is doubtful whether any particular good would come from a public answer to the question you propound.

By the Court. The witness may be excused from answering the question.

COURT ADJOURNED *sine die*.

(432.)

## A TYPEWRITER SYMPOSIUM.

## THE GENESIS OF THE WRITING MACHINE.

The writing machine was not the invention of one man, but as we see it to-day it is the product of many minds. As early as 1714 one Henry Mills, of London, England, took out a patent which is described as follows :

"An Artificial Machine or Method for the Impressing or Transcribing of Letters, Singly or Progressively, one after another, as in Writing, whereby all Writings whatsoever may be Engrossed in Paper or Parchment, so Neat and Exact as not to be distinguished from Print. . . ."

There is no record that this device ever went into practical use. Mills was followed by several inventions of greater or less utility, most of them being apparently an effort to produce printing for the blind.

The first American typewriter was that of Charles Thurber, of Worcester, Mass., who took out letters patent in 1843, but his contrivance had no practical merit. He was followed by Alfred E. Beach, of New York, who made a model of a machine in 1847 which printed upon a sheet of paper supported on a roller, carried in a sliding frame, worked by ratchet and pawl, and having a weight for running the frame. It also had letter and line spacing keys, a paper feed device, line signal bell, and a series of finger keys connected with the printing levers which were arranged in a circle, and struck at a common point on the roller.

From this description it would appear that this machine was in many respects the precursor of the typewriter of to-day. Another form of Beach's invention was a machine to print raised letters without ink (presumably for the blind), for which a patent was granted in 1856. This machine is said to have executed good work, and could be operated with some rapidity.

The typewriter of the present day seems to have been forshadowed in many of its essential features by the devices above mentioned, but owing to the absence of a practical outcome to these inventions it has been the wont to ascribe the present perfection of the machine to Christopher Latham Sholes, and the master minds that with ingenuity

and persistency developed his machine and brought it before the public. Mr. Sholes was born in Pennsylvania, but was of pure New England stock, and while occupying a government position in Milwaukee, in 1867, constructed a typewriter, developing the same from an apparatus for paging books. The first crude instrument was made in collaboration with a Mr. Glidden and Mr. Soule, and was called the "Sholes & Glidden Typewriter," or the "Milwaukee Machine."

In February, 1873, Mr. G. W. N. Yost took this contrivance, which was a common blacksmith's job, and made a contract with the Remington Armory at Ilion, N. Y., to construct some models, using the principles of the old machine, though no single piece or part of it, and to produce a typewriter that would be a success artistically and mechanically.

About this time Mr. Sholes was stricken down with an incurable illness, and the manufacture of the machine was pushed by the energy and capital of other interested parties. During 1874-5 and 6 quite a number of the machines, which printed capital letters only, were put forth, but the business had in it nothing of promise.

It became apparent that the typewriter, to be truly successful, must print lower-case as well as capitals, and in 1877 the first model of this style of writing machine was produced, being the result of the joint efforts and invention of Messrs. Yost, Byron A. Brooks, W. K. Jenne and others.

The names of Sholes, Glidden, Yost, Brooks and Jenne are most prominent in the history of the invention of the typewriter of the present; and it is equally the fact that valuable ideas descended to them from previous inventors. No one man can claim the invention, although those we have named, and some others, are entitled to credit—one for a phase of creative genius, another for the clever adaptation of fugitive ideas, and still another, perhaps, for energy displayed in bringing forward, in the face of difficulties, a machine destined to become such a power in the mechanical, literary and business world.

(433.)

#### THE TYPEWRITER IN A LAW OFFICE.

The benefits conferred upon the legal fraternity by the perfection of the typewriter and the adoption of it in law offices are almost incalculable. The laborious methods in use from time immemorial by the students of Blackstone have been pounded out of existence. The merry click of the typewriter keys is now a necessary accompaniment to the hard thinking of the lawyer. In days gone by the writing of a brief was a task which the most vigorous counsellor undertook with great reluctance. It meant long hours of tedious work and when the "copy" was ready for revision it was such a gigantic mass that the duty was relegated to some poorly paid clerk. But now the lawyer maps out his general policy in the brief, looks up his authorities and gets them in order, and when everything is in readiness for the real labor, behold!—it vanishes into

almost a pleasant pastime. A stenographer sits quietly at a table, and his presence is forgotten as the lawyer states his proposition and proves each and every one by freely quoting from the various decisions bearing on the subject. When the "copy" comes from the stenographer it is so insignificant that the lawyer attacks it with zeal, and it is soon in the hands of the printer.

The typewriter has had a hard battle to fight, however, in the law office, as in every other place into which it has forced itself by its persistent and inherent good qualities. When it was first taken into the legal sanctum "on trial" it was only used for papers of no special value. It was not considered safe to have typewritten those documents which had to stand the test of time, and in a measure this idea was correct; for the ribbons first used were of very inferior quality, and the work produced with them was very liable to fade after but a few years. These defects were soon remedied, and when it became known that the typewritten matter would stand good for any number of years, the machine was gradually given employment in making up leases and mortgages, and it is to-day used in many offices for printing such sedate documents as deeds.

The first typewriters were very noisy little affairs, and it required a sort of education to get used to their incessant chattering. This disagreeable feature has been practically done away with. But, were this not so, the typewriter would still maintain its position as a necessary part of the equipment of a law office. No lawyer of standing in his profession (save some old fogey who wears paper collars and writes with a quill) could be induced, under any consideration, to part with his little assistant. Complain as he may of its noise, howl as he will at the errors of the amanuensis, grumble as he does at its cost, he would look at you almost in fury, and think you insane, should you suggest that he go back to the old method.

No, the typewriter in the law office is a fixture. Though it may be thumped by a dozen different operators, with varying degrees of power and unevenness, in the course of a single week in its allotted period of usefulness, it never complains; though its little insides are allowed to become dirty and greasy, it never gets grumpy; though wound up and wound down, twisted and turned, from daylight to dark, and dark to daylight, it never asks for a vacation; though often misused, scolded and bruised, it goes merrily along day after day, with never a sigh.

I. S. DEMENT, Chicago.

(434.)

#### THE TYPEWRITER AND TELEGRAPHY.

The typewriter in the telegraph office has long since passed the experimental stage and is now an established necessity, especially in press work.

Great progress has been made of late years in the method of receiving press matter by telegraph. At the outset, receiving "news by telegraph" was a slow and tedious process, as it was all received, the same as commercial business at that time, on a "paper

mill," or, in other words, a register. This is a machine with a narrow strip of paper passing through it, and wound up like a clock. In order to do press work it required three men, one to keep the machine wound up and see that the paper passed through correctly, an operator to read the dots and dashes from the paper, and a third to write the matter out. Frequently when the sender was "rushing" he would get two or three bushels of paper ahead of the receiver.

Next came reading by sound direct from the instruments, the operator taking as many copies as needed, up to fifteen, by means of manifold. When additional copies were needed it required another operator. Receiving fifteen simultaneous copies at a high rate of speed is decidedly hard on the receiver, as he must use great pressure in order to get the impression through the fifteenth sheet in readable shape.

This method of doing press work has held its own for a long term of years, but is gradually being relegated to the past. Eighteen hundred words per hour is very good work by this method. But the great need of the large daily papers for more press matter, and plainer copy in the same space of time, has rapidly brought the typewriter to the front.

As near as I can ascertain, Mr. Eastman, night manager of the Western Union Telegraph Co., Portland, Maine, was one of the first, if not the very first, operators in the country to *permanently* use the typewriter in telegraphy. A little over five years ago he introduced the machine which he still uses in receiving press.

The next to use the typewriter was Mr. Johnson of the Associated Press, Boston, some four years ago, and since that time its spread has been very rapid. The Associated Press of New York adopted the typewriter about three years ago, and will not now employ an operator unless he uses the machine, or will agree to learn immediately.

The introduction of the "Phillips code" of abbreviations has made an increase of more than fifty per cent in the speed attained by the sending operators. This can be best illustrated by part of an item which I clip from the *Electric Age*: "Washington 28.—T actg comr o Indian affrs recd t flwgt telgm ts eve fm Indian agt Dixon at Chamberlain, S. D.:—Trs no tbl to be expected at present fm lnds on Crow Creek resvtn. Ty r n mch disturbed bi t recent uprising & thus far no dancg hs b permitted." etc.

The above contains eighty-four letters. As written out in full by the receiving operator, thus: "Washington, 28. The acting commissioner of Indian affairs received the following telegram this evening from Indian Agent Dixon at Chamberlain, S. D.:—There is no trouble to be expected at present from Indians on Crow Creek reservation. They are not much disturbed by the recent uprising and thus far no dancing has been permitted."—it contains one hundred and twenty-two letters.

Frequently such combinations as the following are used: y a p for "yesterday afternoon;" a u t for "adjourned until tomorrow;" c b i for "covered by insurance;" t f for "the following;" h b for "has been;" and hundreds of others.

One writer maintains that a first-class press operator should be able to receive eighty words per minute on the typewriter. Taking into consideration the fact that the receiver must listen to the sound of his instrument, remember instantly the meaning of these combinations, and transcribe them in first-class shape ready for the hand of the printer, it will be seen that he must be able to keep up this speed, and as the matter comes in a steady stream, he has very little or no time for corrections.

In a very few years the operator who takes press reports without the aid of a typewriter will be as much of a "back number" as is the "paper mill" operator of to-day.

HARRY H. WHITE.

(435.)

#### THE TYPEWRITER FOR LITERARY WORKERS.

The typewriter deserves an important place in the literary workshop. There is an unmistakable element of drudgery to much pen writing, particularly when it is that of the copyist, or when a clog to the forthcoming idea. If "the line labors and the words move slow," it matters not what the instrument or manner of writing may be; but when the act of composition is a "fine frenzy," it is a distraction to suffer any impediment to the transference of the elusive idea to paper.

Then it is that some method of quick, and more or less mechanical writing proves agreeable. Few writers there are who can at the first sitting clothe a subject with the diction they are willing to regard as final; undoubtedly the number of famous writers can be counted upon the fingers who are able to conceive and execute that which will stand as final "copy."

After a subject is in any manner jotted down, the typewriter can be made to perform the labor, and make less wearisome a painstaking elaboration of the "garment of thought." In the first place it furnishes a means of swift writing, and accomplishes a surprising quantity of work without great fatigue. Its product is entirely legible, and simulates print. For the latter reason it is in such shape that corrections can be clearly made, and with as much ease and exactness as the editor corrects "wet proof"—in fact, the revision of manuscript is very much like reading proof.

The clearness with which everything stands out (even errors) is an advantage, and when all is ready for the second, third—or tenth—draft, swift writing in easy fashion comes to the rescue, and the labor is reduced to a minimum.

The machine work can be performed by the author, or it can be turned over to the copyist. Quick estimates can also be made of the quantity of matter, for the machine-made character of it makes the calculation of one page answer for an average of many.

The editor likes typewritten manuscript, and why shouldn't he? It is comfortable to read, and exhibits the fine points of the composition as vividly as a page of

DeVinne. He also knows how much matter he is considering, and can calculate more closely upon filling a given space.

As to the effect of the writing machine upon the style of the literary worker, the number of prominent writers who are employing it is evidence that it adds to rather than detracts from the quality of their style. With pen writing there is too much contrast between the spirituality of thought and the humdrum of the labor. It would seem that an author's style would be vastly improved if the spontaneity of invention could be equalled by a rapidity of record.

Certain it is that the typewriter in point of speed far exceeds the pen, and many a fleeting thought can be taken on the wing when experience with the machine has made close attention to it unnecessary.

(436.)

#### THE TYPEWRITER IN THE NEWSPAPER OFFICE.

The prime advantage of the typewriter in a newspaper office is that it remedies the bane of the typesetter's life—bad or blind copy. On the other hand, typewritten copy is the joy of the compositor's heart, because being as legible as printed matter he can set fifteen per cent more of it a day, in an office like the *Boston Herald* or *Globe*, than he can set from the average handwritten manuscript. This would make a difference of over five dollars a week in the average wages of the compositors on the metropolitan dailies.

Desk editors and copyholders much prefer typewritten copy, because it is less trying to the eyes. This advantage will be apparent to everyone when it is understood that the bulk of this work is done at night, when artificial light must be relied upon entirely.

In the business department of the great daily newspaper the writing machine does its work in much the same manner, and is equally as valuable as in any commercial house; so little need be said in this connection.

But in the reportorial division it has a labor and time-saving service to perform. The men who write up the proceedings of the political meetings, conventions and the like, find it considerably to their advantage to have access to a typewriter. The shorthand members of the corps have an especial regard for the little machine; doubtless having in mind the former time when weary hours of pen scratching were succeeded by still more weary—cycles, it would seem, required to transfer the hieroglyphics into legible copy. But with the advent of the writing machine the time gained is no less an item to them than the labor saved.

In short, with the typewriter copy can be prepared in much less time, and being so clearly presented, the editorial treatment of it proceeds much more quickly. Then whatever facilitates the business of the upper regions of a great newspaper office hastens

matters in the mechanical departments below ; so that as small an instrument as the typewriter can be made to command respect in such a hive of industry, where every moment of time gained is money saved.

D. J. McGRATH.

(437.)

#### THE TYPEWRITER ON THE RAILWAY.

One of the enterprising railroads of this country has introduced an innovation in the shape of stenographic and typewriting service upon some of its trains. Presented as a luxury among the other elegant appointments of the road, it has grown into a practical feature, and one greatly appreciated by the traveling public.

We quote from the circular : "The stenographer is an employe of the railroad company, and serves passengers without fees or gratuities. Correspondence only is taken and despatched.

"As the time of the stenographer is limited, it being important that all dictations be typewritten en route between certain points, and in order that every passenger should have an equal chance to benefit by this service, the stenographer records each application, and takes up the work of each in the rotation of entry.

"Twenty minutes are allowed each individual for his dictation at any one time ; though if the stenographer finds that his engagements will permit, a passenger may resume his dictation after other applicants have been accommodated."

The business man making a run between certain points within which this service is granted, can gain a day at least in his correspondence ; and if he be a traveller on a long journey, this facility for letter writing must be very welcome. Probably a great many at first take advantage of it out of curiosity, or to while away the tedium of car riding ; but there is no doubt the service has practical advantages that will outweigh all others, and make it a permanent feature of our railroading.

(438.)

#### THE TYPEWRITER IN THE HOTEL.

The writing machine has also come to be a familiar part of the appointments of the hotel corridor, alongside of the news-stand and the telegraph operator, and in such a place it proves to be more of a convenience to the traveling public than upon the railroad train or in the downtown office.

The writer must be equipped for any emergency, and therefore an expert in every sense of the word. He is commonly a shorthand writer (and often a lady), but it is noticeable that considerable satisfaction comes from dictation direct upon the machine, because of the ready completion of the work ; though, if the dictator has much to be done, and is in a hurry, the shorthand method is preferable.

Dictation direct upon the machine calls for a remarkably good operator, for the speaker may exhibit provincialisms of language or peculiarities of utterance puzzling to the listener in an offhand dictation. Then there is the ever-present contingency and need for fast writing, and the importance of absolute accuracy. Consequently it will be readily understood that uncommon skill is required if the writer would be infallible.

The variety of work also demands a complete mastery of the machine, as well as general education and culture in the manipulator. The equipment of the "stand" should comprise a varied supply of material, a copying press, duplicating process, binding apparatus, etc., etc.; in short, everything that might be called for by the patron—whether he be a contractor desiring to rough out a specification; the president of a corporation who would draw up a contract; the representative of a business house wishing to prepare a list of goods and prices; or travellers in general anxious to dispatch bothersome correspondence.

Thus has been outlined the requirements of the service, which being in its infancy has some faults. It will be noted that the work is likely to be exacting, and the income from such a position is—with few exceptions—not sufficient to compensate the best "all-round" operators; which probably accounts for the variability in the quality of the work as observed by one traveling about the country.

This, however, will be remedied as the movement for better typewriting gains in strength, and the patronage granted warrants the entrance into the business of the finest and best educated writers.

## Business Letters for Dictation Practice.

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(1.)

Messrs. STETSON &amp; ALLEN,

Cambridgeport, Mass.

Dear Sirs:

We wired you to-day, "WHERE IS THE CARGO OF SPRUCE BOARDS FOR NEW YORK CITY? ANSWER QUICK." (25)

You promised us to ship this lumber the first of the month, and our parties have been hounding us for at least four weeks for (50) the same. We must have it in some way, or else purchase elsewhere; in which case we would have to charge you the difference in (75) the price, but we hope to hear from you that the schooner is on the way.

We would like to inquire if you have any (100) intention of shipping our order of ash for New York City, which you have written us at least a half dozen times would come (25) right along. This is either playing fast and loose with words, or else your shipper does not know what he is talking about. We should (50) like to know whether you have any intention of filling this; if not, we shall go ahead and buy stock for your account. We have (75) waited until our patience is exhausted.

When will you ship us another cargo of the hemlock boards? Our party having order 1506 is (200) in a great rush for his lot. We hope you will give him as many 12 x 16 ft. as possible.

Remember that we wrote (25) you that we only got \$11.75 for this cargo, and we hope you will put it in to us at this price (50). You have written us several letters since, but you have not said anything about this.

The "Jonathan Sawyer" cargo is discharging. There is a (75) good deal of narrow stock in it, and more coarse stock than we have ever seen in any sidings from you. It will not run nearly (300) as good as the "Bennett" cargo. Was this sawn at the same mill as the other? It does not look that way.

Yours very truly, (325)

(2.)

Office of WILDCAT R. R. CO.,

Chattanooga, Tenn., November 21, 1891.

Messrs. VAN DYKE &amp; PORTER,

29 West Commercial Street,

Louisville, Kentucky.

Gentlemen:

We have considerable (25) heavy work—mostly excavations—and would like you to see it and bid on same. Dump carts or No. 2 wheel scrapes can be

used (50) to advantage. The material is clay, with now and then a stratum of gravel or loose rock, and probably solid rock will be encountered.

Bids (75) should read so much per cubic yard for each class of material, and cover clay, sand, gravel, loose and solid rock. Earth to be doubled (100) from cut to fill, as the Chief Engineer may deem advisable, free haul not to exceed 1,000 feet.

Kindly favor us with a prompt (25) reply. Bids close December 1st.

Respectfully yours,

General Manager. (134)

(3.)

Messrs. A. B. & CO.,

Herald Office,

New York City.

Gentlemen :

In reply to advertisement in to-day's Herald, I would respectfully tender you my services (25) for the position you have to fill. I am desirous of obtaining employment, and would not consider present salary so much an object as the (50) prospect of a permanent and respectable situation.

I am a young man twenty-one years of age, and single. I have received a good commercial (75) education, and am versed in bookkeeping and accounts generally. I am willing to render myself generally useful, and although I have not hitherto filled a (100) situation, I doubt not that in a short time I should be able to fulfil any duties assigned to me.

In the event of your (25) considering my application for employment, I herewith furnish you with testimonials as to character, and could, if necessary, provide guarantees for fidelity.

Trusting that I (50) may have the pleasure of hearing from you in reply, I remain,

Yours very respectfully, (165)

(4.)

Mr. FRANCIS H. THOMPSON,

St. Joseph, Mo.

Dear Sir :

We are having some demand for electric street-railway securities, and anything that you can submit of (25) that character will have very favorable consideration. As a motor for street railways, electricity seems to be permeating the West, and hardly any city of (50) consequence is now without its electric street railway.

Most of these plants are paying handsomely, and the income seems to be so steady and certain (75) that the public is inspired with confidence in the investments which these securities afford. We are handling a good deal of such stocks, and already (100) the dividends which have accrued are quite handsome.

We think, in view of your wide acquaintance throughout the country, you will be able to give (25) us some transactions in this direction, and we are certain the same will be mutually advantageous. Railroad securities are also in pretty good standing, although (50) the putting of several of the Western roads into the hands of receivers has given some of the bonds a black eye, and we can (75) only make really good propositions just now on the basis of electric securities, farm mortgages and railroad bonds at the moment being a trifle unpopular (200).

The crops in the West promise well, however, and that means prosperity for the farmer, and the ultimate restoring to favor of the Western farm mortgage. Awaiting your (25) action with regard to electric securities, and soliciting any further information which you may secure as you travel through the West, we are,

Yours very truly, (250)

(5.)

Mr. ARTHUR STACKPOLE,

Washington, Kansas.

Dear Sir :

I regret that the insertion of your advertisement in the May ENLIGHTENED EARTH was not acceptable to you. It was done in a (25) purely complimentary way, and came about in the following manner : We had had a certain party's advertisement set up to occupy the space where your (50) ad. was given, and had received his order to insert it in the May EARTH, but as we were not entirely satisfied as to his (75) responsibility, we wrote him that it would be necessary for him to remit in advance for the advertisement, and held our forms open for him (100) twenty-four hours after we should have gone to press. Finally, as his remittance did not come to hand, I thought to compliment and please (25) you by running your ad. in for one issue. The party's remittance came to hand the day after we went to press, but of course (50) the advertisement could not be changed.

I beg to assure you of only the friendliest feeling in every way, and regret that you should (75) not have approved of the insertion of the advertisement.

We may be able to handle some of your new edition at the advanced price, although (200) we should much prefer that you had kept the price at what it was originally stated, and at which price it has already been considerably (25) advertised. We fear an advance of price may somewhat hold its sale.

Assuring you of our desire to please you in every particular, and hoping (50) to have the pleasure of hearing from you at all times,

Yours truly, (263)

(6.)

Messrs. KIMBALL & GRAY,

Brunswick, Maine.

Gentlemen :

We send you by this mail a catalogue of our coal furnace, also circulars of both furnace and combination heaters. The hot water (25) attachment of the No. 24 adds \$40 to the cost of the heater.

The inside water surface should be proportioned to the amount of (50) radiating surface, and, of course, the amount of radiating surface is dependent upon the amount of room you desire to heat with water.

Care must (75) be taken in putting in these combination heaters to have them properly adapted to the work they are expected to do. Our plan is usually (100). in heating a medium size dwelling, to put one radiator in the hall of the first floor, and perhaps one in the dining room, with (25) two or three registers in the other rooms, which complete the lower story. The second story to be warmed entirely by hot water.

You must (50) figure in the first floor for radiators, one foot of surface to 30 cubic feet, and for the second story, if only for sleeping rooms, (75) one to 40 or 45. Of course, if you have but few radiators you would not need so much water surface inside, and depend more (200) on hot air, in which case we should not attach the coil to the heater.

If you can give us an idea of what you (25) have to do, showing a little floor plan of each story and sizes, etc., we could advise you more definitely if you desire it.

We (50) are having a very large sale of these heaters, and believe them to be the coming method for heating dwellings; and think if you will (75) put in a few in your neighborhood, it will prove a beginning of considerable business.

Thanking you for your inquiry, we remain

Very truly yours, (300)

(7.)

JONATHAN HOLWAY, Esq.,

Auburn, Maine.

Dear Sir:

Your favor of the 18th instant received and noted.

The \$2.00 bill which you say was not found in my letter when it (25) reached you, was enclosed when it left the house. Not then having a \$2.00 bill, I was obliged to borrow the money to put (50) in, and for that reason the incident is more distinctly recalled.

However, it was a careless and unbusiness-like thing to send even that sum (75) in the manner I did; and although you are a wealthy house, and I am a person in humble circumstances, that does not make it right (100) for me to accept goods from you without giving an equivalent, or excuse me for having forwarded my first amount in an unsafe way. Enclosed (25) please find money order for \$2.00.

Furthermore, I have been somewhat acquainted with your house for years, and your goods give me perfect satisfaction. Perhaps (50) it is about time for you to receive "a bonus" from your patrons for the excellence of the goods you manufacture. If I had not been (75) a patron of your house for some time, of course I could not in truth write all this, and perhaps should not be as desirous (200) of having you keep the enclosed money, which in this case I certainly wish you to do.

Trusting that such an occurrence may not happen (25) again, I am

Yours respectfully, (230)

(8.)

Messrs. SHAW &amp; SHEPARD,

Lancaster, New Hampshire.

Gentlemen :

The attention of the trade generally is respectfully called to the improved method employed by us for the setting of fancy colored or plain glass. (25) for any purpose. By our method we obtain a perfect sash, that cannot be broken by any ordinary usage, is particularly adapted for panels, (50) windows, etc., is not affected by heat or cold, is impervious to dust or moisture; can be handled without danger of bending or distorting in (75) any manner, and is as stiff as a solid light of glass. We are not restricted to any design or particular shape. When set in its (100) frame no rods or other equivalent are employed, which mar the effect of the design and are objectionable for many reasons. This will be highly (25) appreciated, particularly in door panels, as the rigidity of this setting will withstand the slamming of doors with less danger of breaking than a (50) solid plate.

The metallic face or back of setting can be furnished in any color or finish desired, such as zinc, copper, nickel, silver, gold, (75) etc. All colors are durable, being electric plate. When desired, the face can be one color and the back of another, to correspond with inside and (200) outside finish of the building. Designers can have full sway with this setting, as we are not limited in any respect. Our setting being cut (25) from a solid sheet of metal, there are no joints, and therefore we can follow any line desired. The cost of this setting is but (50) little, if any, higher than for lead work; this in itself will, we think, commend its use. Samples will be furnished to responsible parties.

Yours truly, (275)

(9.)

Messrs. MITCHELL &amp; BICKFORD,

Taunton, Mass.

Gentlemen :

I have yours of the 24th instant, and have drawn voucher in your favor for \$257.73, total receipts (25) for 432 tickets sold being \$275.45.

I, of course, am as sorry and disappointed as you can be that (50) the affair did not turn out more satisfactorily, but as far as the advertising is concerned, we certainly did everything that could be expected (75) of us. Every particle of the matter you sent was delivered to our agents all along the line of the road, with definite instructions to (100) have it posted or distributed, and over 100 of your bills of different kinds were placed in the hands of our bill poster here, who (25) states that they were put up in good shape and thoroughly.

Besides this, we ourselves had 2,000 large hangers printed and sent everywhere (50) within the proper territory, and also expended \$30.00 in advertisements occupying good space in all Lewiston and Portland papers.

As your address is, I (75) presume, continually changing, and it may require a day or two to get the customary signatures to voucher, I shall not direct the treasurer to (200) send to Lawrence, but hand to me, and I will forward to whatever address you may give.

Kindly take particular notice of this.

Yours truly, (225)



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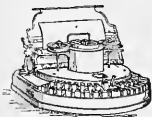
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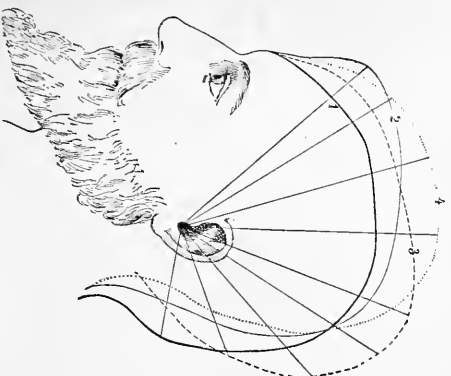
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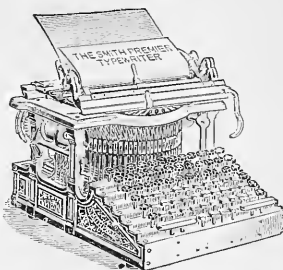
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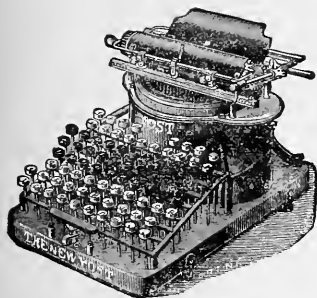
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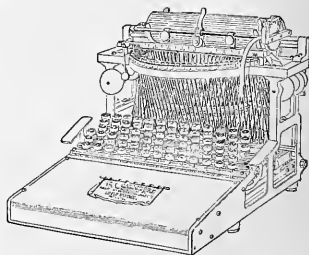
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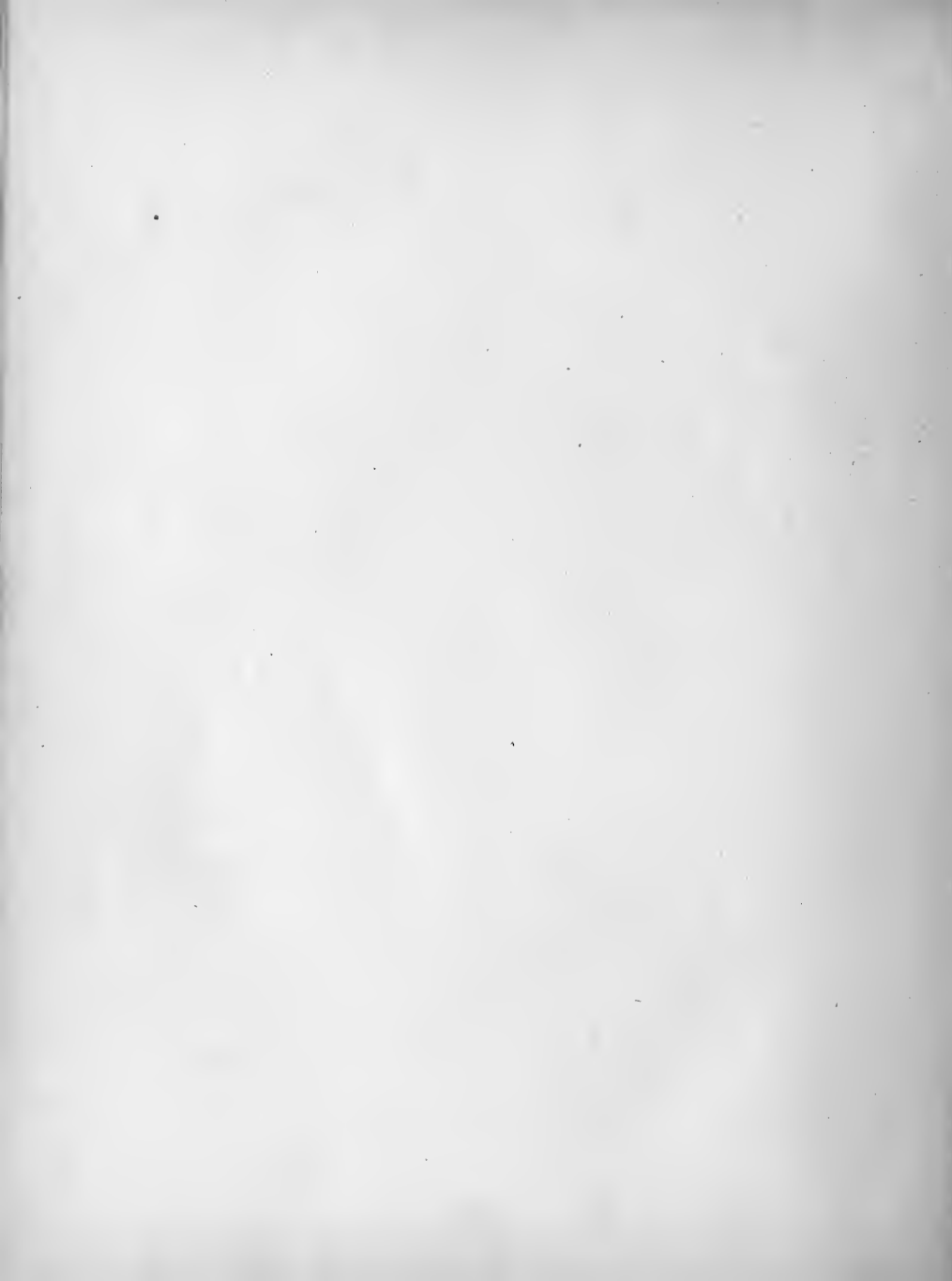
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